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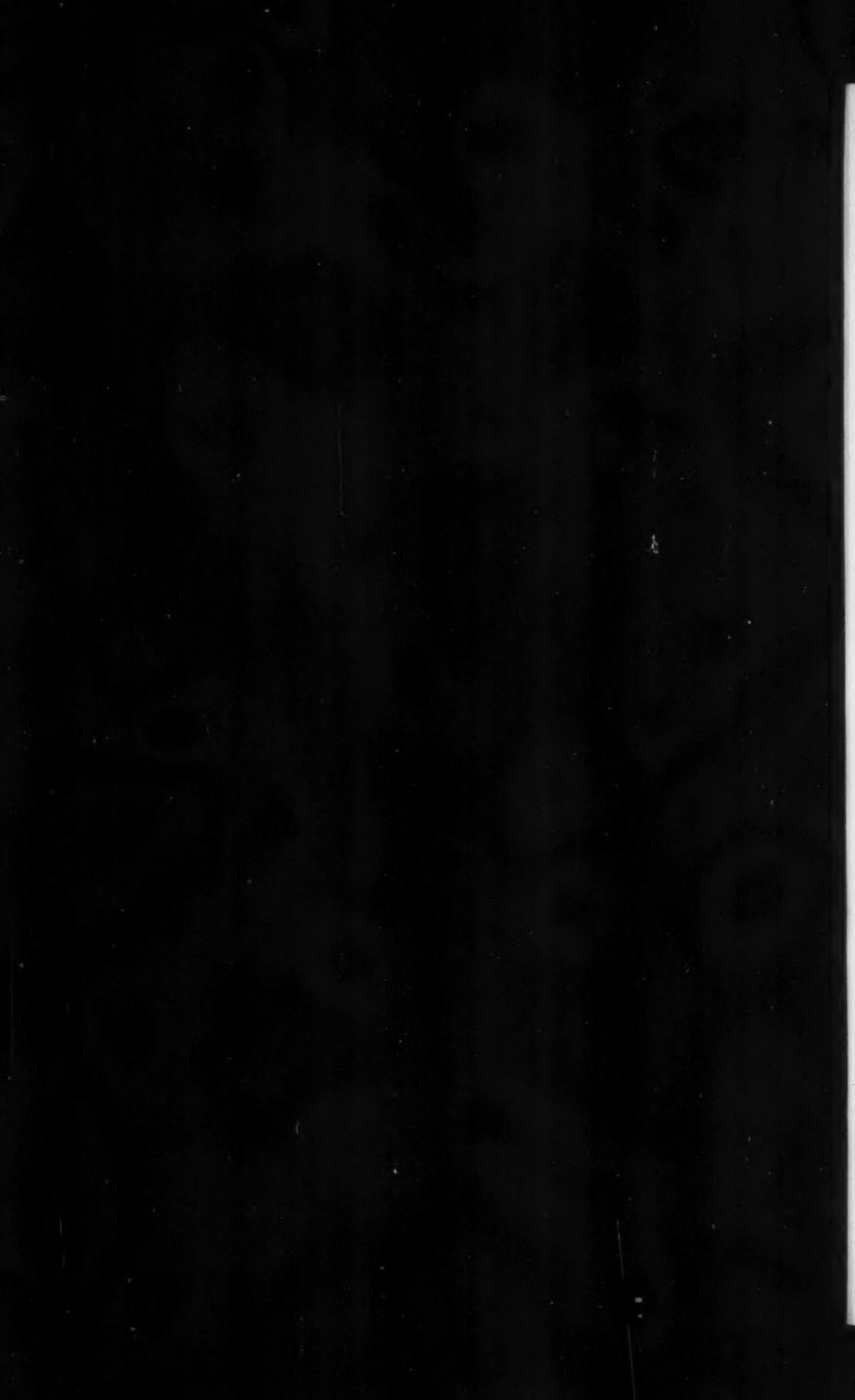
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JOURNAL
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Vol. 22 No. 6

FRED C. ZAPFFE, Editor

November, 1947

Medical Education and Medical Licensure in Peru

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Under the sponsorship of the Office of the Coordinator of Inter-American Affairs, I had the opportunity recently of surveying medical education in Peru. The purpose of this presentation is to discuss briefly the program followed in that country, with the idea in mind that it may in some way contribute to improved relationships between medical education in the United States and in the South American countries.

Although there are several other universities in Peru, San Marcos University, located in Lima, is the only one which has a medical school. San Marcos University was created by a charter granted May 12, 1551, by Charles V, Roman Emperor and King of Spain. It is said to be the oldest university in the western hemisphere. Two chairs of medicine were established by royal charter in 1638.

Dr. Hipolito Unanne is known as the father of medical education in Peru. He was appointed to a Chair of Medicine in the University in 1789. Due to his initiative, a separate school of medicine was approved by royal charter in 1815 and began its existence under the name of the San Fernando College of Medicine and Surgery. With the establishment of the Republic of Peru, it became the College of Independence in 1821, and in 1856 became the School of Medicine of San Marcos University.

In addition to the Faculty of Medicine, San Marcos University has faculties of science, letters, economics, law, dentistry and pharmacy. It derives its financial support from gifts and income from endowment, from certain special taxes granted by law, from direct federal grants and from student fees.

Up until five years ago the entering classes in the medical school were limited to approximately seventy (70) students. However, the school was required to discontinue such limitation and the 1944 entering class numbered about two hundred and fifty (250).

The location of the medical school in the city of Lima, with a population

of more than 500,000, is fortunate in that it offers assurance of adequate clinical facilities. For teaching purposes, the medical school has available the following hospitals:

- Dos de Mayo Hospital (802 beds; for men only)
- Arzobispo Loayza Hospital (626 beds; for women only; no maternity wards)
- Maternity Hospital (376 beds)
- Hospital del Nino (400 beds; Children's Hospital)
- Hospital Victor Larco Herrera (1,700 beds; mental hospital)

These hospitals are conducted as separate institutions and are located in scattered areas of the city. All except the Children's Hospital, which is government owned, are owned and conducted by the Sociedad de Beneficencia Publica de Lima, a semi-official welfare society which has considerable endowment and receives some government support. It also derives considerable income from lotteries which it continuously conducts throughout Peru.

Although staff appointments are not directly controlled by the medical school, its relationships with these hospitals are such that, in general, members of the medical faculty are in charge of the services. At the Children's Hospital, a special wing of the hospital was built by the government for the use of the medical faculty for teaching. In the men's, the women's and the children's hospitals the medical school maintains special laboratories for its teaching services. These are in addition to the laboratories maintained by the hospitals.

The requirements for admission to the medical school involve two years of work in the School of Science. The medical course itself covers a period of seven years with the last year designated as the "intern" year.

During his sixth year, each student is required to write a thesis under the supervision of one of the departments. This requirement is taken seriously by both the students and the faculty. On the acceptance of this thesis, the student is granted a Bachelor of Medicine degree. Then, having satisfactorily completed the work of the seventh year, he is eligible for admission to the licensing examinations. These consist of three examinations: one in medicine, one in surgery and one in public health, pediatrics and obstetrics. These examinations are given by a committee of the faculty. On passing the examinations, the candidate is recommended for the certificate of physician and surgeon to the assembly of professors which has the legal authority for licensure.

If a graduate then desires to become a Doctor of Medicine, he undertakes some independent piece of work and prepares a thesis which he submits to the faculty. The faculty appoints a committee which examines the thesis and also considers the personal qualifications of the candidate. If the committee reports favorably, the candidate reads his thesis in the assembly of professors and is questioned on it. If approved, he is granted the M.D. degree. Very few graduates acquire the M.D. degree.

This brief statement would seem to indicate an unusually comprehensive undergraduate program of medical education. However, the organization and

administration of all higher education in Peru differs so greatly from that in the United States that it is extremely difficult to visualize it on a comparative basis.

All education, including medical education, has been developed largely under European influence. Full time faculty members are practically non-existent in any of the departments of any of the schools of the university. Teachers in the arts and science schools are either professional men or hold positions in business or industry. Some serve as teachers in high schools. Teachers of the basic medical sciences in the medical school are either in the private practice of medicine or hold other part time positions in hospitals or laboratories.

Practically all courses in the College of Arts and Sciences involve mainly lectures, and the laboratory periods are devoted largely to demonstrations with little or no individual work by the students.

The fact that only a very small per cent of the students in either the pre-medical or medical course have textbooks, tends to further complicate the educational program.

Without attempting to discuss all of the unusual and complicating factors in the conduct of medical education in Peru, the premedical and medical course will be reviewed briefly.

THE PREMEDICAL CURRICULUM

The premedical course offered by the Faculty of Science is not the regular two year course which in Peru meets the requirements for a Bachelor's degree, but is a special course said to involve fewer and easier courses. The curriculum of the premedical course in general is as follows:

First Year:

Superior mathematics
General biology
Physics (mechanics and dynamics)
Inorganic chemistry
Superior gramatics
Drawing
Foreign language
Premilitary training

Second Year:

General physiology
Comparative anatomy
Physics (heat, light and electricity)
Organic chemistry
Physical chemistry
Experimental psychology
Drawing
Foreign language
Premilitary training

Although this appears to be a rather formidable two year schedule, the courses involve only three one hour lectures per week. The students, in general, do not have textbooks. In some of the courses, student reporters sell mimeographed copies of the lectures to the students.

In connection with the science courses, there is usually one two hour laboratory period every two weeks—a total of twelve or thirteen periods during the year. Most of the laboratory work is in the nature of demonstrations. In chemistry, groups of ten students do a single experiment during a laboratory period. In biology, there is a microscope for every five or six students.

Previously, when the medical school was able to limit and select its entering class, many of the premedical students supplemented the required courses and met the requirements for a Bachelor's degree in the two year period. They, thus, not only enhanced their chances of acceptance by the medical school, but if not accepted they would be in a position to continue in the Faculty of Science and earn the Doctor of Science degree by two additional years of work. Now students consider that there is no advantage in taking the more difficult course since the medical school is required by law to accept all students who satisfactorily complete the easier premedical course.

THE MEDICAL CURRICULUM

The first three years of the seven year course in medical school proper are devoted to the so-called preclinical subjects, including physical diagnosis. Anatomy is continued throughout the first two years. Biochemistry is taught in the first year and physiology and bacteriology and parasitology in the second year. The third year is devoted to pathology, pharmacology, pathologic physiology and physical diagnosis. Laboratory facilities appear to be entirely inadequate and much less emphasis is placed on laboratory work than in the United States. Some idea of the inadequacy of laboratory equipment is indicated by pointing out that for a class of 146 students, the department of physiology had five small spring kymographs and one large motor driven kymograph. In pathology, the class is divided into sections with one microscope for every two or three students.

The fact that all of the teachers in the preclinical departments serve on a part time basis makes proper organization and administration of the departments and the courses for which they are responsible very difficult, if not impossible. However, it is remarkable the type of teaching and research certain members of the faculty are attempting to do in spite of the many handicaps with which they are faced.

The work of the fourth, fifth and sixth years is carried on in the various teaching hospitals. Students spend their fourth year in the men's hospital in connection with courses in medicine, surgery, tropical and infectious diseases and tuberculosis. The fifth year is spent largely at the women's hospital. Here they have assignments to the following departments: medicine, surgery, otorhinolaryngology, dermatology and syphilology, and radiology. During this year, one-half of the class at a time have three, one-hour lectures and three, one and one-half hour periods of practical work per week at the maternity hospital for fourteen weeks. In addition, each student is assigned to a delivery room from 8:00 A. M. until 8:00 P. M. daily for one week. Here, under the supervision of a faculty member or a midwife, he will have from eight to ten deliveries.

The schedule of the sixth year includes assignments to pediatrics at Hospital del Nino, to psychiatry at the Victor Larco Herrera Hospital, to neuropathology at Dos de Mayo Hospital and to gynecology and ophthalmology at Arzobispo Loayzo Hospital.

All of these assignments involve an unusually large number of lectures,

demonstrations and amphitheater clinics, with relatively little time devoted to actual bedside work by the students. Although an adequate amount of clinical material is available, the time spent on the wards is, as a rule, entirely inadequate to provide opportunity for students to satisfactorily work up and follow patients assigned to them. Instead of dividing the classes into small groups for rotating assignments to the clinical departments, as is customary in the United States, an entire class or large portion of the class are usually assigned to departments for brief daily periods throughout the year.

Although what appears to be an adequate amount of laboratory work is done by the hospital and school laboratories, the students have had no responsibility in connection with it.

In the seventh year or so-called intern year, students are supposed to devote four months to medicine, four months to surgery, two months to obstetrics and two months to pediatrics. These periods are supposed to be spent in the teaching hospitals or in other hospitals in or near Lima. These assignments are in no way comparable to internships in the United States. The students do not live in the hospital and actually spend relatively little time on the wards. Throughout the year they have classes at the medical school in public health and legal medicine, as well as clinical assignments in medicine and urology at Dos de Mayo Hospital.

In considering this education program, it is important to emphasize again that medical education in Peru has been influenced largely by European and particularly by French medical education. Great emphasis is placed on the teaching of clinical medicine by lectures and clinics, supplemented by a certain number of demonstrations. In general, it is fundamentally the continuing influence of the medical education of the latter part of the nineteenth century.

Anatomy was then the one basic science which was stressed and today two years are devoted to it in Peru. In general, as the other laboratory branches of medicine developed, they apparently came to be considered as valuable accessories to clinical medicine rather than integral parts of it. Laboratory tests and procedures were left in the hands of those physicians who developed a special interest in these fields and perfected themselves in them. Thus in Peru physicians practice clinical medicine and surgery or laboratory medicine—and there are many practitioners of laboratory medicine in Lima. As a result of this point of view, little emphasis has been placed on the training of all medical students in laboratory procedures.

On the other hand, as has been pointed out, all of the clinical courses appear to involve far too many lectures. However, when it is realized that very few of the students have textbooks, one would hesitate to suggest the elimination of a lecture system which at the present time is the chief source of information for the students.

Although it may be true that many medical schools in the United States have placed too much emphasis on the basic medical sciences as separated and isolated subjects, it is apparent that in Peru insufficient emphasis has been placed

on them as a foundation for clinical medicine. The faculty of the school recognizes this and is anxious to extend these courses as soon as facilities and financial support will permit.

What has been said in regard to the use of part time teachers, the physical facilities and the educational program might suggest that the faculty is relatively poorly trained in scientific medicine. As a matter of fact, the opposite is true. Practically all faculty members responsible for courses in the medical school are capable men who have had graduate training in their respective fields. Of the heads of the basic medical science departments, the professors of histology, biochemistry, physiology and pharmacology have had special training in the United States. The professor of bacteriology had training in the National Institute of Hygiene in Madrid and later spent three years in the United States working at Johns Hopkins Medical School, at the National Institute of Health in Washington and with Dr. Hideyo Noguchi as a Fellow at the Rockefeller Institute. The professor of pathologic physiology is a graduate of Harvard Medical School. Following graduation, he worked with Dr. Francis Peabody and has had much additional training in this country. The professor of pathology spent two years working with Dr. Ludwig Pick in Germany and spent additional time in pathology in Spain before assuming his teaching responsibilities. The professor of anatomy is a busy surgeon who had several years graduate training in surgery in St. Thomas' Hospital in London.

The professors in the clinical departments have, in general, had their graduate training in European medical centers.

A considerable number of the assistant professors and instructors in both the preclinical and clinical departments have had fellowships for graduate training in the United States. A total of nearly twenty of the younger faculty members are now in the United States on fellowships.

The various agencies and foundations interested in medical education have made a remarkable contribution through their programs for the support of fellowships for Peruvian physicians for graduate study in the United States. However, medical education in Peru has not been in a position to profit as fully as it should from these fellowships. Many enthusiastic and well trained faculty members returning from graduate training programs have found that the school was not prepared to support them adequately in their teaching and research. It has invariably been necessary for these men to seek additional positions outside of the school or to devote a considerable portion of their time to private practice in order to secure an income sufficient to support themselves and their families.

To bring the various governmental agencies and the public of a country to a full realization of the high cost of medical education is not an easy task. Although considerable progress has been made in this regard in the United States, it must be admitted that more than one-half of our medical schools are today entirely inadequately supported.

The lack of satisfactory textbooks in Spanish at a price which the students

can afford to pay is an enormous handicap to the entire program of medical education, not alone in Peru but in most of the South American countries. The United States Department of State through Science Service is now initiating a program the objective of which is to make such textbooks available to South American students. The availability of sound textbooks and current medical literature is essential to the development of satisfactory programs of medical education in the South American medical schools.

The school in Lima is now in the process of erecting a new medical school building on a site adjoining the Arzobispo Loayza Hospital. One of the foundations in the United States is expected to provide the laboratory equipment. This building program should provide adequate teaching and research facilities for the preclinical departments if the size of the student body can be kept within reasonable limits. At the same time, Arzobispo Loayza Hospital is planning a 300 bed addition. This will make available, in immediate association with the school, a women's hospital of more than 900 beds.

If San Marcos University School of Medicine is provided with adequate financial support and if it is given full control over its entire educational program, including the appointment of its faculty and the admission of students without political influence, and if medical textbooks and medical literature are made available to the student body, there is every reason to believe that this school might develop outstanding education programs in both undergraduate and graduate medicine.

Education for the Professions*

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I.

This paper is not intended to add another skirmish to the long standing controversy concerning the measuring of a profession. A rose by any other name would not smell as sweet, no matter what the proverb makers would have us believe. Webster would not so easily have become America's orator if his name had been a polysyllabic conglomeration of consonants. There is a peculiar aptness in the fact that the poet of "Trees" should be named Kilmer and the name of Bach can be aptly and easily associated with the lilt of one of his sonatas. The reasons for these various coincidences in language are not far to seek.

The controversy concerning the meaning of a profession has real validity but the validity depends not upon the use of the word "profession" as contrasted, for example, with such words as trade or industry but the validity comes from the content of the idea to which the term "profession" is attached.

Frankly, this approach to my subject may sound verbose but in reality, it leads right into the heart of the subject matter itself. There have been many political philosophers and there are many educational philosophers today who, for one reason or another, would attempt to obliterate distinctions between the professions, on the one hand, and the trades, the industries and the various branches of commerce, on the other hand. And these educational philosophers have found followers among the political economists in foreign countries as well as here. In this country, there has been at least one pronouncement of no less a tribunal than our own Supreme Court which attacked the concept of a profession by attacking the validity of the term as applied to the oldest of the natural professions.

Since it is necessary before discussing "education for the professions" at least to indicate with some definiteness what we are speaking of, we might recognize that there is an area in our cultural life which can be logically and consistently differentiated from such activities as those associated with trade and industry, with commerce and with the humanities. One can, of course, insist upon the invalidity of such a concept because we can also and correctly today speak of the profession of commerce or of the industrial professions. Unfortunately, too, we cannot make too much of a distinction between a trade and a profession and hence, between education for a trade and education for the professions for the simple reason that associated with each trade, there are somewhere in the history and policy of the trade, definite professional activities;

* Read at the Fifty-seventh Annual Meeting of the Association of American Medical Colleges, held in Edgewater Park, Mississippi, October 28-30, 1946.

and associated with each profession, there are somewhere in its policy, activities which would ordinarily be designated as those of the tradesman. The Veterans' Administration struggled with all of these concepts in attempting to write the regulations explanatory of Public Law 346 and the lawmakers themselves found their difficulties to be almost insuperable in attempting to write the Bill out of which Public Law 346 emerged. The differentiation between "on-the-job" training and academic education were the handles attached to two ideas but the denotation of those terms is far removed from their connotation and their connotation still remains a battleground for differences of opinion even two years after the law has been in effect. We are still quarreling whether a residency in a hospital is "on-the-job" training or academic education. The battle is one not merely of words but of dollars and the answer on one side or the other of the controversy means bread and butter to the physician veteran and to his wife and children.

II.

We all agree that the difference between a profession and a nonprofessional avocation lies, among other differences, in the demand made upon the education of the professional person. How extensive that education must be in order that a vocation may be classed as a profession, upon that there is obviously no agreement or common opinion. Nursing is said to be a profession and even though its theoretical claim upon such a designation may not meet general acceptance, nevertheless, nurses have surely for decades considered themselves as professional persons. It requires three years of education, sometimes still called "training" to make a nurse. But there are many professions which would require two and three times that number of years. Perhaps, then, nursing is a minimal profession? You would not think so if you were to study the recent pronouncement of a Committee to Study a Single Accrediting Body in Nursing, in which pronouncement the claim is made that the profession of nursing is exercising a leadership at present in clarifying many of the issues involved in professional status. The suggestions are made that the three year hospital trained nurse gradually be eliminated and that there remain in the nursing field, the vocational nurse and the professional nurse, the latter, of course, being the collegiate, the postcollegiate, and eventually, the "doctoral" nurse.

Another criterion that has been practically employed for differentiating a profession from an avocation, is the extent and nature of the self-determination of the practitioners. It is an application of this criterion upon which some of the recent neoprofessions have sought to establish their claims. "We shall not get adequate recognition as a profession from the colleges and universities," equivalently said the chemists, "until we establish our own accrediting agency and accredit the institutions which are preparing chemists." And since those institutions have already been accredited by other agencies, the chemists decided to accredit the departments of chemistry in our schools of higher learning. No matter how willing we may be to acknowledge the claims of the chemists in this instance, their action is still significant since it meant that in their opinion, self-determination consolidated their claim to professional status.

Engineering had previously de-institutionalized accrediting by accrediting subdepartments of engineering, thus lending validity to the claim that engineering is not one, but many things. If the chemists have refrained thus far from going to the extreme, nevertheless, their action lent solace to other claimants for professional status. The journalists are now beginning to mature plans for paralleling the action of the chemists, and the foresters, the economists and the agriculturists are taking steps to publish lists not only of approved schools in their respective fields but also of approved departments in institutions that have already secured general approval.

Obviously, the effect of all this has been to de-liberalize the approved departments and to give them a professional orientation. If this process continues and if its effects become as pronounced as potentially they may well be, many new and many revived problems will be posed to the educator. Perhaps it is all a sign of the times. It is most gratifying that this Association has stood four-square for a liberal education as the best possible preparation for the profession of medicine. But the utilitarian disease becomes epidemic periodically and we must always be on the watch for its recurrence. The end of the new trend, if it be a trend, is not yet in sight. We may look for a termination of the process only when all of the departments which are susceptible of separate and individualized professionalizing, have been given the coveted status through this particular process of control. Of course, the heralds of revolt are already polishing their trumpets to blast their calls to action; but thus far, their vigorous but unsustained threats have not succeeded in intimidating the accrediting agencies. Even if one of them, not too far back, did speak of the seven devils of accrediting, and a group of them wrote a magna charta of institutional liberties, their respective institutions would be the first ones to resent exclusion from a list of approved schools. And so, if there is to be an approved list of professional schools, our schools must be on it.

The situation has serious implications for medicine and the medical schools. If you discuss the situation with the general educator or with some educational administrators, you will be surprised, as I have been, by the explosive resentment which you are apt to elicit. You will be told that medicine is the worst fragmentizer among the professions. You will be told that when the medical practitioner gets tired of routine analyses, or finds a particular procedure too time-consuming to merit the attention of his superior potentialities, or if the physician finds a procedure too difficult, he has someone train a technician for the work. At first that skilled person is only a technician; then he, or mostly she, is asked to take background courses; then he or she is required to take a college degree to put her technical work into a cultural setting and she is almost ready for professional status. Then these cultured technicians band themselves into an organization and when sufficiently conscious of their power, they begin to certify and classify their members, and thus a new profession is developed out of the fragment of the doctor's neglected or routinized medical responsibility. Then the Council on Medical Education and Hospitals takes notice, a list of approved schools is submitted by the new association and is given A.M.A.

approval and the new profession emerges, self-conscious of its newly achieved dignity. Medicine is accused by not too few students of accrediting processes of having fixed the procedures here described as a pattern. It is thus that the polychotomy of the doctor's professional skills has resulted in the many professions auxiliary to medicine.

To be sure, all this has affected medical education. We still tell our medical students about clinical laboratory procedures, but the tendency to minimize their importance as a discipline for the medical student, so that he may learn from first hand contacts the limitations of reliability of a procedure, or the limitations of its validity due to the condition of a patient, or the limitations of variability due to the synergistic or antagonistic involvements, these concepts may often be mere words to the medical student simply because he has not personally experienced or performed the various steps in the particular procedure. It may even happen that unless there is someone who makes himself obnoxious by constantly harping upon the subject, many a vista into the intricacies of modern medicine remains closed to the student, who regards laboratory work as the obligation of the technician. The attitude resulting from such an outlook among upper division medical students, clinical clerks, interns and residents is sufficiently well known. The student contents himself with the superficial cliche, that "interpretation of laboratory data is medical practice; the finding of the data is technology."

What I have said of laboratory work is, of course, equally applicable to the technologist in physical therapy, in occupational therapy and in radiology, to the dietitian, the hospital administrator, and the medical record librarian and the technological assistant of the anaesthetist, all of whom have already achieved a measure of professional self-consciousness through all or some of the processes which I have described. It is becoming applicable in great part to the psychiatrist's aid and to the bibliotherapist. If the medical social worker and the pharmacist have pursued a different course in securing professional status, history must be consulted for the reason. Their course surely antedated the present trend, making for a longer stabilization of their achievement. The course of nursing in its achievement of professional status shows many chronological losses and gains, and its present status is surely anachronistic.

Now that all of this development has taken place, whatever we might or could have done about it, it is most important that medical interest in the supervision of these activities be not permitted to wane; that medical leadership in the future evolution of these professions continue unabated; that medical responsibility for the health care of the nation and of individuals continue to demand integration of the skills and viewpoints of these new professions in the medical profession's concern for the giving of adequate medical care. It is difficult, as many a practitioner of medicine has said, to give good medical care to a patient, unless the physician has the full cooperation of the nurse. You cannot adequately teach medical students if you have a good physician on one side of the bed and a careless nurse on the other. If the auxiliary professions have been segregated from medicine, though still essential to medical practice, the

care of the patient will be as effective and successful as the weakest of the participating factors, unless in particular instances, the physician by his dominant and compensating skill recognizes deficiencies and meets emergencies. But surely that cannot be regularly expected. The mere mention of that possibility, however, suggests a further problem, which every medical educator, no doubt, has faced. We educate our physicians in the midst of an entourage of auxiliary workers. Can we in this way prepare him for practice away from such helps?

All of the newly emergent professions which I have mentioned thus far have educational requirements and, therefore, professional status, lower than that of medicine. But the tendency to fractionize is found also at the higher end of the scale. Specialization is in reality a magnification of a fraction of medical practice. How far specialization has affected medicine and medical practice is, of course, one of the really large problems in the history and the achievement of medicine. No one can quarrel with the physician who wishes to restrict his practice or his research to ever so small an area of medical thought or medical interest. No one can quarrel with such a physician if he attracts to the sharing of his enthusiasm and to the sharing of his consequent enlarged income, other physicians who are carried away by admiration or the desire to excel. It is when such a physician with his newly acquired followers conscious of the exclusiveness of their achievement set themselves up as a class and lay down rules for other physicians that may want to join them, that the situation assumes a deeper meaning for medical education and acquires significance for the profession. How far the fractioning process should be allowed to go and still merit official recognition as a new professional group, is a question which deeply affects both undergraduate and graduate medical education. Each university and school of medicine will, of course, face and answer this question for itself but that fact does not excuse the medical profession from facing these issues. Besides, the answer to these questions affects the status of the general practitioner, both in his practice and in the attitude towards him which is developed in the schools, and that, in turn, has a deep significance for medicine not only in its scientific but also in its human, its social and its economic aspects.

The Specialty Boards are examining boards and as such, they are in a very real sense, accrediting agencies. They have become even standardizing agencies, even though some of the Boards would prefer to disclaim one or the other or both of these designations. While they have been founded to approve the individual physician who wishes to restrict his practice, they have still assumed a large responsibility for giving directions to medical education, practice and research. The viewpoints from which they study their policies must encompass the whole field of medicine, and must not synthesize findings from one field of medicine with those from other fields without due regard for medicine as a whole. Illustrations of this point will readily occur to anyone conversant with the situation. The residency program through which most of the specialists of the immediate future are now being prepared, cannot but form a most important and influential link between the Boards and the undergraduate schools.

III.

Any consideration of the education for the professions would be unpardonably incomplete without at least a passing mention of the professional man, in our case, the practitioner of medicine. Here again, we encounter differences in definition, diversities in approach, variations and even contradictions in ideals, resultants and emergents from different philosophies of life.

I realize fully that because a profession must be lived upon a higher intellectual plane than that of the average man, the temptation to find the difference between the average man and the professional person in the intellectual traits, is but too obtrusive. The professional person is regarded as a person of greater mental capacity and mental achievement; as a person whose experience makes upon him greater demands of emotional control, fineness of feeling, scope of imagination; as a person characterized by alertness, comprehensive sympathies, resourcefulness, poise and emotional balance; as a person of greater unselfishness, self-effacement, capacity for heroism, than are average men and women. In short, as we endow the professional status of the individual with higher than ordinary social prerogatives, we are apt to identify professional status with higher than average culture and refinement. Even if this analysis is differentially true of the various professions and of any one profession at different times, there is still enough truth in it to serve as a starting point for a moment's consideration of the professional person.

Perhaps, we could all agree that one concept be found which, if put into words, would satisfy most of us as the expression of the dominant characteristic of the professional man. I think the professional man, no matter how attenuated his profession might be, and no matter how diluted his professional spirit might be by less worthy considerations, can be called professional only if he has in a higher degree than is expected of the average man, a sense of responsibility and a capacity for bearing obligations, that bind him for whatever worthy motives, to their rigorous performance. To me, the most far-reaching and significant differentiation between the professional man and the non-professional man, is a moral one. Far be it from me in any way whatsoever to minimize the intellectual discriminations between a profession and a non-profession. I want to emphasize the many criteria by which different authors have insisted upon long preparation, upon the difficulty of subject matter, upon the assumption that the thought content of the profession must of itself be of a more elevated character than the thought content of a non-professional activity. All these are important points upon which to lay stress but in the last analysis, it is the moral concept of responsibility that justifies the enrichment of the intellectual content of the profession. Judged by this standard, we may establish a hierarchy in the profession. That profession will be highest which carries the greatest intrinsic responsibility. To paraphrase this, if we assume that the most worthy function which a human being can perform is to care for other human beings, aside, to be sure, from his obligations to God as the Supreme Being, we may say that that profession is the highest which is the most concerned with the welfare, the happiness, the health of man.

Furthermore, there would seem to follow from this line of thinking that the degree of immediacy of the contact between the professional person and man is a factor to be considered in estimating the dignity of a profession. And here again, we are confronted with one of the most amazing experiences in human life which is traditionally described by that oft quoted but little understood phrase "the personal relationship between the patient and the physician," which principle to me is the very foundation stone of the professional dignity of the physician, a prerogative which socialized or federalized medicine is seeking to annihilate. From various viewpoints, we can justifiably place medicine at the very top of the hierarchy of the professions. As we recede from the immediacy of the responsibilities for men, so too, we reach the areas of diminished professional responsibility.

The strains of the war have tested the validity of the ideals, the ethics and the cultural practices underlying the traditional concept of a profession. With some of the professions, however, the war has dealt gently and amicably; with others, it has dealt indifferently; and with still others, it has dealt with a fierce cruelty. I should say that the ministry was given a huge opportunity, as always happens to the priesthood and to the ministry when human beings are plunged into the depths of anxieties, sufferings and sadness. Journalism, I should say, was dealt with more or less indifferently. It is true that war demanded an unyielding objectivity of journalism but to counter-balance that added test, the war gave to journalism, the greatest opportunity which journalism has ever had in the history of civilization, if there be included under journalism, the journalism of the spoken and of the written word.

Law was dealt with more or less indifferently by the war and it was only subsequent to the war when the law was invoked to try the war criminals, to define the rights of minorities and the legal might of the victor nations, to write the regulations by which international amity and understanding are to be maintained.

But the two professions which were crushed and fired in the fierce crucible of war and subjected to the flames of hatred no less than to the searching flames of international and national loyalties, were, of course, engineering and medicine; understanding by these terms not merely the specific professions which go by those names but including under the concept of engineering, the full amplitude of the professions from civil engineering to the abstract thoughts about the atomic bomb and from the concrete processes of pontoon building to the esoteric secrets of nuclear degeneration; and understanding by the term medicine, the full amplitude and comprehensiveness of all the health-caring professions.

These two professions have passed through the most searching impossibilities in the history of science and in the experience of man. It is my opinion, inadequate and partisan though it may be, that the two professions have emerged from the crucible of their testing, purified of dross, cleanly, bright, new, ready to face the larger responsibilities for which the fires of warfare have given them new resistive powers and new capacities.

But there is little to be gained in continuing this discussion on an abstract or generalized plane. Engineering has developed a new outlook. Whereas, in World War I, engineering became keenly aware of the place in its own economy, of the chemist, in World War II, particularly at the end of it, engineering realized its debt and its obligation to, and its overwhelming dependence upon, the physicist. There were foreshadowings of Hiroshima and Nagasaki prior to the atomic bomb. There are those listening to me who were given promises and warnings, vague and confidential, of the struggles of the human mind to deal with nuclear fission and with the control of the time element in intra-atomic chain reactions. But how few of those who received such premonitory insights, took them as serious prophesies of real events which were to come in a real future. Rather, we feared that they might be expressions of an unrealizable hope for the early termination of the war.

Engineering has a new outlook, a new philosophy, a new basis, new techniques, new tools, new claims upon human consideration, new meanings in human economy and has been given new influences in guiding the destinies of man. If engineering is now about to live up to its new vocation, it must perforse develop a new education and make new demands upon its votaries and devise new processes of selection of those whom it will invite into the inner sanctuaries of its activities. It will demand higher aptitudes and higher achievements and a broader power of synthesis of those whom it will predestine to occupy the places of the high priests in the new profession. What engineering did not realize, however, prior to Hiroshima, or realized only shadowly and premonitorily, was that the atomic bomb was an experiment not merely in intra-atomic chain reactions but also, if I may coin the phrase, in experimental ethics and a crucial test of engineering's capacity to carry obligations and responsibilities. Did the workers and directors of the project foresee that the peace would be determined by the retention or diffusion of the secret they held? The opinions expressed indicate that misgivings were entertained on numerous issues but scarcely on the fundamental moral issue which is one of the most tantalizing ever faced by man.

Medicine, however, has been confronted with no such new moral issue. The war intensified the responsibilities of medicine to an almost impossible extent but it created no new basic moral problem for medicine. Medicine has been held responsible for the conservation of human life under any and all conditions even those as excruciating as those of Okinawa or the Battle of the Bulge.

Medicine has risen to indescribable heights and if the triumphs of medicine have not culminated in an explosiveness which parallels the triumph of engineering, medicine can boast that never before has human life been safer and more sacred against the plottings and schemings of those who would destroy human life. There is not a major division or activity in the field of medicine that has not risen to the highest peak of its achievement. Chemotherapy and physiotherapy, pharmacology and surgery, psychotherapy, together with preventive medicine and medical social service, have all triumphs to record which challenge the credulity of the human mind of an older generation and make us feel the sureness,

the confidence, the hopefulness about the future of our people with the assistance of medicine.

Medicine records these achievements because at no time were medical men oblivious of their responsibilities. When you call for judgments about a medical officer, or about the physician who stayed at home to carry on, his competence to function as a physician is almost always taken for granted unless he be deemed noteworthyly deficient. If compliments are to be paid to him, they take the form of a comment upon his faithfulness to duty, his fidelity to his post, his steadfastness, his determination, his resistance to foreign allurements, his unsparing devotion to others, his disregard of self, his resourcefulness in danger—all comments in which the man's responsibility is the common factor.

I know that the school of medicine is not a school of philosophy or theology, but if I counsel that more be done by all of us to enhance and strengthen and deepen the responsibility of our students, must we all think immediately of a course in character education or a course in denominational theology? Can we not think or better, should we not think of the *chief* factor which makes medicine a profession? No, I am not pleading for another course but for greater emphasis. We are already insisting upon faithfulness in adhering to time schedules, on fidelity in answering calls of patients in the hospital and outpatient department; we are insisting upon faculty selection so that men of large moral stature no less than of large scientific dimensions should be an example to our students; we are emphasizing professional modesty and adherence to the Code of Ethics. We are doing ever so much already. But perhaps we can do even more of the same kind; more personal guidance and vocational direction, more insistence upon the influence of the preceptor; more pointing to the great figures of medical history; more quoting from the thinkers of the profession and the makers of medicine; more narration of the unselfish achievements of our faculty members and of our doctors. Silently but persistently these repetitive acts extolling moral values in medicine will have their effect. And perhaps, even one or two of us might make bold to mention God at times as the source and end of human greatness and, therefore, even of professional responsibility, and to mention Christ as the Model of the Physician, in bearing responsibility even unto death. All this, as part of the education of the physician, as a professional person.

The Health Insurance Plan of Greater New York

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In view of the possible implications in medical education of some of the pre-payment plans for medical care now being developed, the following is a brief presentation of the program of the Health Insurance Plan of Greater New York.

This plan is attempting to combine as far as possible current thinking on the subject of health insurance. It is a distillation of the experiences of the past, both in Europe, where for a period of sixty years programs have been in operation covering several hundred million people under different forms of sickness insurance, and in this country, representing the experience in several hundred plans of voluntary sickness insurance. The effort has been to combine the best features of the various programs adapted to the particular needs in this country with emphasis on voluntary prepayment insurance which would guarantee the highest quality of medical care.

The program of the Health Insurance Plan, like all efforts in health insurance, is closely related to many other problems of broad social significance, particularly such questions as unemployment, old-age, disability and survivor insurance and other responsibilities of social and medical security for the employed person. It is a part of the effort of the wage earner to obtain protection against the risks to which employed persons are liable.

The preliminary studies indicated that two of the outstanding difficulties of many insurance schemes in the past, whether voluntary or governmental, arose from the unsatisfactory and incomplete medical care offered to patients and the unsatisfactory payment and conditions of work for the doctors.

Historically it is of interest to examine the German Sickness Insurance Act of 1883, the first national effort at sickness insurance. The Act provided for a contributory plan whereby the employer provided one-third of the premium and the employee two-thirds. It applied primarily to employed persons, leaving the family coverage optional, but, 95% of the insurance funds that were created by the Act elected to offer family medical care. The program also was comprehensive in that it endeavored to cover specialists' services. The method of payment to the doctors was on a fee-for-service basis which led to many of the difficulties not only with the German plan but since has complicated all insurance plans. The income limit and distribution of the doctors and a great many other details were covered by the Act. An important item in the regulations was the limitation of patients to one thousand per doctor and 1,350 if the family was included. Other countries such as Denmark, Switzerland, Sweden and the Netherlands developed sickness insurance plans based in part on the German system.

In Great Britain the Commission on the Poor Report in 1900 was divided in its recommendation. The majority of the Commission reported in favor of national health insurance but the minority recommended medical care on a local level and on a salary basis for physicians. The National Health Insurance Act of 1911, under the sponsorship of Mr. Lloyd George followed the majority recommendation and became effective January 1, 1913. It is particularly interesting to note that the present plans of the British government and those under serious consideration before World War II more closely resemble the minority recommendation than those of the majority. The British plan developed since 1911 is on a contributory basis covering only employees, although the families were made eligible in 1924 but financial aid has not been sufficient to put it into effect. The services were restricted to general practitioners and neither hospital care nor the services of specialists were provided. The method of payment of the physicians is based on a capitation basis (9 shillings per insured person per year). The income limit and other arrangements similar to that in the German scheme were adopted. The number of persons per doctor on a panel was limited to 2,500 but the average has been about 1,000. Most of the families of insured persons are cared for by the panel doctor of the employed person which has been a source of considerable income to the practicing physician.

A large variety of plans have been in effect in this country for a good many years, such as medical services on a cash indemnity basis as provided by the commercial insurance companies; Workmen's Compensation Insurance, covering industrial accidents and occupational diseases; and, many plans maintained by medical societies. However, less than five per cent of the non-institutional population of the country has insurance protection for medical care. Somewhere in the neighborhood of 27,000,000 have hospital insurance under various Blue Cross Plans and about 3,000,000 in New York City are now covered by the Associated Hospital Service.

The general problem can be illustrated by the fact that about 4 per cent of the families of the country bear close to 80 per cent of the actual medical expenditures. Probably 50 per cent of the hospital payments by individuals are made by approximately 8 per cent of the population. This illustrates the fact that illness is unevenly distributed in the general population and is furthermore unpredictable for the individual. It is generally agreed that the population can pay for the average cost of medical care if the risks are spread over the entire population for a period of time. This is the elemental principle of insurance.

Based on these considerations, the Health Insurance Plan was launched to provide comprehensive medical services covering all forms of medical care ordinarily the responsibility of the practicing physician. This is in contrast to the limited coverage by the cash indemnity companies and the programs of most of the medical societies. It offers medical care of specialists in the hospital, home or office, as well as the services of a general physician. The emphasis has been upon preventive medicine, early diagnosis and competent treatment, all of which shift the focus of attention away from purely curative medical practice.

It represents also the greatest interest to the public as well as to the individual family seeking sound medical advice and the early treatment of illnesses which might later become serious, such as cancer, tuberculosis, heart diseases, metabolic and kidney disorders and a variety of other crippling and killing diseases.

The second consideration was that of establishing the whole plan on a group practice basis. Medicine today is so complex that no individual can possibly master the entire subject. Physicians must work together, and actually do in individualized practice, but the usual method of consultation with specialists when provided is very expensive. It seems only wise to make group responsibility the key to the plan which carries with it many advantages to the patient as well as to the physician. Cost of operation is lower and opportunities for continued education of the doctors and for occasional vacations and other conditions of work offer the highest inducements to the physician.

The third consideration was the inclusion of the entire family of the employed person on the basis of the public service contemplated by the HIP.

The fourth feature is that of prepayment. Originally the idea was to set up a 4 per cent payroll deduction, at least one-half of which would be paid by the employer and the other by the employee. However, owing to state regulations, it has been necessary to place the plan on a flat premium basis. An income ceiling of \$5,000 for those eligible is set in order to insure the inclusion of supervisory personnel which represents a small proportion of the total number of employees and is important in the management of the program and the enlistment of employed persons.

The fifth major consideration was the method of paying the physician. Instead of compensating the doctor on a fee-for-service or cash indemnity basis, it was decided to make payment to the approved groups on a capitation basis. Undoubtedly a number of groups when developed, will compensate their own physicians on a salary or percentage basis as has been done in many private clinics. This program of payment is in contrast with the cash compensation on a fee-for-service basis offered by the casualty indemnity companies and most of the medical society programs. The fee-for-service basis of payment has always failed in the past and seems likely to produce difficulties at any time.

The sixth point is that each insured person and his family is free to choose the individual physician of a group as his physician. The groups are free to accept or reject applicants as they may decide.

The seventh major consideration is that of the organization of the Health Insurance Plan itself. It is a membership corporation, set up under the provisions of Article IX C of the State Insurance Act, and comprises a Board of Directors of twenty-four. One-third of the Board are medical men, one-third represent business and the remaining third, labor and the public. In order to guarantee adequate medical supervision, a Medical Control Board has been set up comprised entirely of physicians who will be completely responsible for all professional matters. The Medical Control Board of fifteen is made up of two physicians from the Board of Directors, five from the medical groups, one from

the New York Academy of Medicine, five from county medical societies and one from the Coordinating Council of these societies. The fifteenth member is nominated jointly by the Coordinating Council and the Board of Directors.

The eighth consideration is the underwriting rules which provide that only employed groups are insurable. The dependents are limited to the spouse and unmarried children under eighteen years. Each employee group to be considered must be twenty-five in number or greater. The insured group must constitute 75 per cent of some natural employment unit. The employer must pay not less than one-half of the premium and the insured persons must have some form of hospital insurance or purchase it at the time of enrollment. Under the policy the benefits include general medical, surgical or obstetrical care, laboratory diagnostic procedures, periodic health examinations and preventive medicine, physical therapy and radio-therapy when needed, the professional services for the administration of blood or plasma, eye refractions, visiting nurse services in the home as prescribed by the medical group, and ambulance services when ordered by the doctor.

The services do not cover medical care covered by Workmen's Compensation Laws or similar legislation or for any conditions or treatment which are available under the laws of the United States, such as veterans' benefits, as an example. It does not cover the treatment of acute alcoholism, established tuberculosis, drug addiction, mental or nervous disorders and chronic illnesses in any institution other than a hospital for general medical care. All cosmetic, other than restorative surgery is excluded. The services do not provide for a dentist or private duty or special duty nurse.

The annual premium rates for the Health Insurance Plan are \$29.64 per single person, \$59.28 for a married couple, and \$87.00 for a family of three or more. In addition to this premium, there are the premiums of the Associated Hospital Service or other hospital insurance coverage. From the premiums are paid the cost of administration reserves, visiting nurse service, the indemnity provisions for an occasional patient who must be cared for outside of the group through accident or acute illness away from home and finally the capitation basis of \$19.20 per insured person which is paid to the medical group. This capitation basis is almost double the average payment by individuals at the present time in the wage earner groups covered by the Plan.

The Health Insurance Plan regulations also provide that there shall be one doctor to every 800 insured persons in each group. Each group of physicians must represent all of the major phases of medical care including specialists in the important subdivisions of medical practice. Over one-half of the members of the medical group are general physicians, internists and pediatricians, indicating the emphasis upon diagnosis, general medical care, preventive medicine and health advice to individuals and their families. The premiums and capitation payments insure a considerably higher average net income for the physician in the group than is now generally enjoyed by physicians in the same category of individual practice.

The Health Insurance Plan is operating in a field in which other major groups are endeavoring to provide limited or partial medical care. The Veterans Administration, for example, has very large interests in medical care for ex-service men and women who have service connected disabilities. The City of New York provides medical care in municipal institutions for a large number of persons in the lower income brackets. The medical profession has set up the United Medical Service which is a medical indemnity corporation and is operating largely with limited medical services on a fee-for-service basis. Some of the large insurance companies are in this same field offering limited medical care for specified diseases, surgery and obstetrics. The labor unions are greatly interested in welfare funds and other methods of improving the medical and health services but are more immediately concerned with wages, working conditions and other considerations.

There is in the background the possibility of federal action in the field of sickness insurance either through compulsory sickness insurance or some form of aid to local and state governments. It is agreed, however, that the Health Insurance Plan, operating in the field of comprehensive medical care organized along sound administrative lines with financial and professional assurance of a high quality of medical care provided by organized groups of practitioners who are qualified to render modern medical services, represents a going program which ought to be articulated with any future development should there be any fundamental change in the approach to this important matter of the health of the nation. These problems rank equally high with those of education, unemployment, economic security, the prosperity of the country, and in the final analysis with questions of national defense. No other problem before the American public is more compelling or more vital to the future of the nation than provisions for adequate medical care for the employed population. A program such as described so briefly, if widely developed and administered locally, will have important relations with hospitals, medical education and community as well as family and individual health services in keeping with present day professional teaching and needs. It should afford excellent opportunities for recent graduates and the staffs of hospitals and medical schools for the continuation of educational opportunities, security and the cooperative medical practice which modern medical services require.

Anatomy in the Changing Medical World*

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Perhaps my title is rather grandiose and rather ambitious; therefore I might add a humbler subtitle, "Remarks on an Anatomical Experiment"—an experiment in which all of us, teachers and investigators, are experimental animals, subjected to a rapidly changing environment. We know what is apt to happen when an animal or species fails to adjust to environmental change, and, therefore, it may not be out of place to spend 2.565 per cent of our total program time in looking at this experiment.

Some one could, of course, ask: What more can be said regarding the place of anatomy in medicine than has been said or written many times? Probably nothing, and yet one could, in turn, ask: Is the frequently heard criticism of anatomical teaching entirely ill founded? On the investigational side, have we nothing to reply to those who would look at this week's program and say: "Most of this is zoology, or physiology, or endocrinology, rather than anatomy."

Unless, therefore, we are entirely satisfied or entirely hopeless regarding the position of anatomy, there still seems room for discussion. In half an hour one can do no more than raise a few questions and express a few opinions, beginning with another glance at the title.

"The Changing Medical World." We think at once of the development of vast and important bodies of knowledge, like biochemistry, helping us all, but crowding in on us. We think of new drugs, like penicillin, changing therapeutics and, therefore, changing the type of knowledge needed in practice. More fundamentally still, we think of the newer conception of the purpose of medicine in society—constructive medicine—not curative, not preventive in the narrower sense, but rather the promotion of health. How are we fitting our students for this changing environment? How are we contributing to the change?

Another term in the title is "Anatomy." Woppard, the English anatomist, once defined it as anything in which an anatomist is interested. It is true that much anatomical knowledge has been produced by workers not labeled "anatomists," but for our present purposes we shall, like Woppard, more or less accept the classification that appears in university calendars. The remarks will refer particularly to the teaching of gross anatomy, but the ideas would apply, I think, to teaching or research in any branch of anatomy.

"USEFUL" AND "PRACTICAL" KNOWLEDGE

Probably we should all readily agree that whatever we do in teaching or research should, in some way or other, be useful. But when we say that, and

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especially if we substitute "practical" for "useful," we find ourselves in the middle of a controversy. We so-called "preclinical" teachers are very apt to be told that the teachers who really know what students ought to learn are the clinicians, the "practical" people. Now, whenever I hear the term "practical" or "useful" I think of Singer's words in his "Evolution of Anatomy," when he was telling of the downfall of science in the Roman Empire.⁶ He wrote: "The plaintive cry for what is 'useful' as against 'theoretical knowledge' echoes down the ages. We hear it still. But when and where that cry swells into a chorus, then and there Science dies."

I am not suggesting that clinicians, in their own work, are "practical" in the narrow and bad sense, but I have noticed, time after time, an interesting phenomenon. Some clinicians who are well acquainted with the living body, who use real anatomical knowledge in their work, seem to become hypnotized by the anatomical textbook when they are presenting anatomy to their students or colleagues.

For example, a surgeon, who applied a very real knowledge of living anatomy in his work, was invited to speak to an anatomy class on the importance of anatomy in surgery. After his address, a colleague who was rather outspoken asked him what he had talked about. "The blood supply of the stomach." "And when did you learn about the blood supply of the stomach?" his colleague asked. "Oh, I read it up before I went in to talk to them," the surgeon replied.

Sometimes, depressed by such experiences, and by an insistent demand for teaching and investigations of practical value, we are inclined to envy the mathematician, who is reported, when dying, to have given thanks that nothing he had ever discovered was of any use to anybody but himself. And yet we can all think of researches that have begun with limited practical objectives and have led to fundamental principles. It all depends on the investigator and his freedom to follow the investigation wherever it may lead.

Similarly in teaching, even if we have to deal largely with facts chosen because they have some direct application in medicine, there is not one of the facts about the human body that cannot be used to illustrate a general biological principle, and from that it is only a short step to show that ideas are often of more practical value than facts.

To be practical in this broad sense is to be scientific, and it might be worth while asking ourselves if we are applying the scientific method to our teaching as fully as we might. First of all, have we defined our objective quite clearly and, secondly, are we adopting the proper means to attain it?

CLINICAL SPECIALISTS

At most medical schools it is known that most undergraduates will become general practitioners; but at how many schools is this knowledge really acted on? If an anatomist asks his clinical colleagues what anatomical information they expect the students to possess, does he not fairly often find that it is specialists' knowledge? Admittedly, the undergraduate should know what specialists,

such-as surgeons, can do for their patients, but is this the same as getting a smattering of a specialist's technical knowledge? Should even the anatomist carry in his head the knowledge of anatomy that a specialist needs? Sometimes it seems that a clinical specialist does assume that, as if he expected a professor of English to be a Webster's dictionary—3 volume edition. Should not, rather, the anatomist be a kind of guide book, frequently brought up to date? Should he not be able to bring his experience, his judgment, and his acquaintance with a wide range of literature to the help of the specialist, and bring his knowledge of the whole body to bear on a specialist's region? Let us take a simple example. A few weeks ago a dental practitioner was going to tell his students about the radiological features of the mandible. In discussing it with an anatomist, he pointed out that an important feature was a small area where the trabeculae of cancellous bone were sparse, creating a small radiolucent spot, which had been given a special name, as if it were something unique. The anatomist did not know much about this particular area, but it seemed to him that its nature would be better understood by reference to a similar but more obvious area that is found at the other end of the body—in the calcaneus. It seemed, also, that a better conception would be obtained if, instead of treating different structural features as independent, with special names, the teacher would emphasize the continuity of things, beginning, perhaps, at the Haversian canals of compact bone, passing to cancellous bone of fine mesh, then of coarser mesh, coming to those larger spaces that I have referred to, and so to the medullary cavities of long bones.

THE UNDERGRADUATE'S NEEDS

In this discussion of specialists we seem to have gone rather far from the undergraduate; but does it not suggest that the undergraduate, at the beginning, is, perhaps, safer in the hands of an anatomist?

And so we come to ask: What should he learn in the hands of an anatomist and, especially, how should he learn it? The psychology of learning is still largely empirical, and we might profitably ask how people learn things in "real life," i. e., outside universities. I recall the remark made by a man who for years had worked at an agricultural experimental station on such problems as testing the efficiency of fertilizers. In solving the problems, he had made notable contributions to pure mathematics and had clarified the whole logic of experimentation. He had, then, been appointed head of a university department, and his experience there led him to say that he thought that the greatest hindrance to the advancement of scientific knowledge was the static pedagogy of the universities.

Turning away from the universities, therefore, we may ask: "How does a person learn to drive a car, or to skate? What is the best method of learning a language?" Is it not generally recognized that the best way to acquire any kind of knowledge is to use it from the beginning, or, more exactly, to acquire it by using it?

Another contrast between university learning and real life learning seemed to be well shown by two motion pictures that I once saw. In one of them an actor portrayed a medical student memorizing the maxilla. The other, a news-reel, showed a candidate being examined for the government diplomatic service. The examiner asked him: "What would you do if you met such and such a problem?" The candidate replied: "I should consult such and such books" (naming some legal works that dealt with the problem). I do not suppose any of us nowadays expect medical students to memorize the maxilla, but does the Hollywood conception entirely misrepresent us? It may, perhaps, also be said that graduates soon and easily get into the habit of consulting books and journals. Are we quite sure of that? Are we sure that they bring adequate critical processes to bear on what they read? If we agree that, after graduation, our students will be consulting books instead of trusting to memory, should we not make their undergraduate course, in laboratories, clinics and examinations, more like the conditions that hold in practice? Does not this, perhaps, point the way to a solution of one of our greatest problems—the growing volume of knowledge?

FACTUAL INFORMATION

There is, nevertheless, much information to be learned. How should it be selected? Should we not find out what sort of information a practitioner is most likely to need—information for which he ought not to depend on a reference book—information, also, that he should have before he can use a reference book or journal quickly and intelligently? Let us try to apply these suggestions to gross anatomy by making three suppositions.

Let us suppose, first, that a student is expected to know enough to enable him, in a dissected body, to find and identify most of the structures that can be revealed by ordinary dissection. I say "most of the structures," because we can eliminate, for example, many of the arterial branches that even a specialist, a surgeon, does not need to know.

Secondly, let us suppose that the erroneous ideas created by the embalmed cadaver are prevented from getting root in the student's mind by radiographs, on view at the time when the cadaver is being examined, also by fluoroscopy and by occasionally causing the students to open up a recently killed or anesthetized mammal alongside their human cadaver.

Thirdly, let us suppose that the student is required, as soon as possible after his laboratory period, to take the experience he has gained in the laboratory, to use his atlas and his textbook as guides, and thereby to learn how to identify everything that he can feel in himself and other living subjects; to learn how to indicate where he would expect to find the structures that are not palpable; to learn how bones move by feeling them; and to learn how to test muscle functions, as illustrated, for example, in the British Medical Research Council's Memorandum on Peripheral Nerve Injuries.¹

If the student follows such a series of steps is he not obtaining a fairly basic acquaintance with gross anatomy in the way in which he should use it?

TOPOGRAPHICAL RELATIONS

This scheme seems to exclude the learning of relations of individual organs—the relations that load the anatomy textbooks. What should we do about relations? First, we should ask ourselves: Does even a surgeon use a memorized list of relations of individual organs? Secondly, when a person knows his way about a city, what is the form of his knowledge? Has he not in his mind's eye a rather simple plan, in which certain prominent buildings and main streets give him a clue to the position of other things? Comparable plans can be drawn for abdomen, thorax, and other regions of the body, and their adequacy can be tested by considering the problems that meet a practitioner. It is interesting, for example, to test a plan of the abdomen by thinking of a patient who, a week or ten days after an appendectomy, shows a rise of temperature and other signs of the development of pus. Hamilton Bailey,² an English surgeon, points out that there are nine possible locations of pus to be considered. The anatomist can test his plan of abdominal relationships by seeing how far it helps one to remember these nine possibilities. Having tested his plan, he can show his students how it can be used, not only in one problem, but in a host of other diagnostic problems, and he can show the importance of going from region to region in following nerve distribution, lymph drainage, and so on. This can be done in quite an elementary fashion, without details of pathology, and I am inclined to think that an anatomist, standing more or less on the outside of clinical work, is in a better position to do this than is a clinician. The anatomist is nearer the student, more of a learner, than the experienced clinician.

GENERAL ANATOMY

So far, we have considered mostly what may be called topographical anatomy. But anatomy, even naked-eye anatomy, is much more than topography. For example, is it not the duty of the anatomist to emphasize the fact that the body is an organism, not just a collection of parts?

Should not the anatomist emphasize the interplay of mind and body, illustrated by Wingate Todd³ in his radiological studies of the behavior of the alimentary tract and more recently by Wolf and Wolff⁴ who showed the effect of a person's state of mind on his gastric mucosa? Has not the anatomist a chance to utter a warning against the danger of overemphasizing either the psychic or the somatic part of medicine?

Should not the anatomist, by repeated examples, get the student used to the idea of variation—of differences between persons in respect of every organ and function? This does not mean memorizing variations, but a readiness to make a proper allowance for them when necessary. Of course, if the anatomist shows his students how to make proper allowance for variation in measurements, e. g., of statures and weights, he may be accused of teaching them physical anthropology. Looking at modern physical anthropology, I am inclined to interpret that as praise, rather than blame, for a modern physical anthropologist is essentially a human biologist.

To take another example. If the concept of "constructive medicine" is important, should not the anatomist provide some notions of child development and of the process of aging in adults? Is he not bound to consider the idea of the "normal," and will not this lead him to consider the interplay of heredity and environment, and of the factors, endocrinic and others, that regulate and harmonize the parts of the organism?

LIMITATIONS OF TIME

All these topics can be called "general anatomy," and we may be asked: How can they, along with topographical anatomy, possibly be covered in the time available? Should we not introduce courses in morphology, child development, genetics, experimental embryology, and so on?

Even if the curriculum provided the time, I doubt if such separate courses would be desirable; and in contemplating this array of topics there are, I think, three things to be remembered.

First, all our students have had, at least, an elementary course in biology. They have forgotten most of the factual details, but have retained some notions of structures, of functions, of genetics, of development and growth. Can we not refresh their memories a little and build a little on that knowledge, directed toward human beings?

Secondly, should we not realize that our main aim in general anatomy is to suggest ideas, broad conceptions, and modes of thought? We may present many facts, but we should make it clear that they are to be used merely to build up these general ideas. We may show, by references to literature, that there are abundant sources of information, but we are not implying that the student should set out trying to educate himself by referring to those sources.

Thirdly, should we not try to come upon general principles in the most natural way? For example, when the student meets, say, the brachial plexus, if we believe that the experimental embryologists have thrown some light on the factors responsible for plexus formation, can we not indicate it in a few words, as an example of the kind of contribution that experimental embryology is making to our knowledge of topography?

All these remarks and questions have necessarily left untouched many topics—the use and abuse of lectures, for instance, the importance or unimportance of dissection, the linkage of histology with gross anatomy; but in considering any such topic should we not keep two things constantly in mind?

VISUALIZING THE GRADUATE

First, should we not try to picture the student after he has graduated, when he has forgotten most of the facts that he has learned, when he will have to learn for himself much that he never knew before? He will be far away from an anatomy laboratory and museum, kodachrome slides, motion pictures, and other teaching aids. He may not even be using much topographical anatomy at all; but, in whatever field he is working, he will be meeting new ideas and

he must go on learning. When we have him as an undergraduate is it not our main concern to set him on the way to being a student all his life?

QUESTIONING TRADITIONAL BELIEFS

Secondly, should we not always be questioning our traditional and deep-rooted beliefs? If we find ourselves taking it for granted that such and such an amount of lecturing is valuable, or that so many hours of dissection are necessary, instead of teaching by specimens already dissected, or that simple dogmatic statements are better for undergraduates than discussion of pros and cons, should we not look into those beliefs, and see how much actual evidence we have that our methods are really helpful toward achieving our ultimate aim—the production of students?

If we carry out such investigations we may emerge with some rather revolutionary ideas. We may find ourselves in disagreement with State Board examiners and with conservative opinion in many quarters; but we may, I think, emerge with methods of education that would be suitable not only for general practitioners, but suitable also as a basic education of clinical specialists and of investigators. We shall, at all events, I believe, justify our survival as anatomists in the changing medical world.

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The Law of Agency in the Practice of Physical Medicine Its Educational Implications

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The law of agency affects the physician in a peculiarly forceful way whenever he prescribes the use of physical agents for therapeutic purposes. Few physicians administer their own physical treatments. For the most part they rely on the services of technical assistants. The results achieved are affected not only by the judgment of the physician in the selection and dosage of the agent prescribed, but also by the skill and knowledge of the technical assistant to whom the treatment is entrusted. This is true because the effectiveness of many forms of physical therapy is dependent completely upon the technique of their application. There is probably no corollary to this in the practice of any other branch of medicine. At least, it is difficult to cite one affecting a comparably large number of patients in which the success of treatment is so inextricably woven into the vocational skills and professional judgment of a nonmedical intermediary.

Supervision of the acts of the individual to whom the physician has delegated power is implied in the law of agency, and the physician is held liable for the acts of his agent. It behooves him, therefore, to have concern first, for the scope and quality of the general and professional education of the physical therapist on whom the success of the treatment prescribed may depend, and second, for his own competency as a supervisor. In short, the physician must be able to differentiate between failure of the therapeutic agent and the illusion of failure which has its source in the multiple details of the technique of its administration. Many of the prejudicial attitudes toward physical medicine stem from inability to exercise critique in the evaluation of results. Above all else, the physician prescribing physical medicine must have sufficient familiarity with the operational details of the duties custom permits him to assign to a nonmedical assistant, to know whether or not the results achieved approximate theoretical expectations.

In most states, physical therapists do not have a recognized legal status. Thus, only a licensed physician can delegate to them the right to administer physical agents for the alleviation of human suffering or the treatment of disease. This concept is generally accepted by physical therapists trained in schools accredited by the Council on Medical Education and Hospitals of the American Medical Association, to the extent that, by and large, patients are accepted for treatment only on referral from a physician.

The current emergence of physical medicine as a branch of medical practice tantamount to a specialty, has suddenly thrown into relief the implications of

educational patterns unimportant until recently. The urgency of the problems thus aroused has been further accelerated by the allocation of unprecedented sums to technical education on both the undergraduate and graduate levels. Although steps of signal importance have also been taken recently to improve the scope and quality of the teaching of physical medicine in the Medical Schools of this country, it will require years of study and experience to bring educational opportunities in these two aspects of a single field into proper perspective and alignment.

The major impetus moulding the pedagogical philosophies behind educational programs designed to train assistants functioning as the agents of medical practitioners in the field of physical therapy has come from the technical group itself.¹ This interest originated shortly after the termination of the first World War. In recent years it has been marked by a steady moving away from vocational training and toward an increasingly professional type of technical teaching superimposed upon a substantial prerequisite collegiate education.²

Although physical medicine proved itself to be a useful adjuvant form of therapy in the rehabilitation of those disabled in World Wars I and II, medical schools did little in the interim between these conflicts to put physical medicine on a sufficiently sound scientific basis to justify the inclusion of its systematic study in the training of all physicians. Thus, while medical education in this field was virtually at a standstill, the technical assistants responsible for the administration of physical treatments prescribed by the physician were being exposed to an increasingly academic study of the principles and practices of physical therapy. The inevitable result has been inordinate domination of a legitimate branch of the healing art by nonmedical practitioners.

Having had little or no opportunity to familiarize himself with the technical aspects of physical therapy, the average physician grants wide discretionary powers to the agent to whom he delegates the right to treat the patient in his place and stead. It is common knowledge that prescriptions for physical treatment are frequently so nonspecific as to necessitate the exercise of high degrees of judgment on the part of the physical therapist. Community curative workshops and rehabilitation centers separated from hospitals offer nearly insuperable administrative hazards to good medical practice. Supposing the patient is admitted to treatment only on the order of a licensed physician; the affiliation of that physician with a treatment center, remote from his place of practice, may be so tenuous as to be nonfunctional. Although the physical therapist is lawfully acting as the physician's agent, the responsibilities inherent in this relationship are not being met, and the so-called ethical practice of physical therapy becomes a form inseparable from the assumption of discretionary powers which the law presumes to be possessed by no one other than a licensed physician. Even where physical separation does not complicate the problem of supervision, many hospital divisions of physical therapy operate virtually without medical contact other

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than that provided by the prescription. Except for the orthopedist, few physicians follow the patient to the physical therapy department. This, and the long tolerated discrepancy in educational opportunity on the medical and technical level, have made it difficult to establish the kind of relationship between the physical therapist and the referring physician imperative for the development of physical medicine's maximal therapeutic potentialities.

The time has probably come for medical schools to examine into ways and means of correcting the untenable position of the average physician in the rational practice of modern physical medicine with its dependence on detailed knowledge considerably in excess of that included in undergraduate curricula. This end cannot be achieved quickly. Its realization is linked with the introduction of formal courses in medical physics and instrumentation, and with a preclinical laboratory study of physical therapeutics on a plane comparable to the teaching of pharmacology. Without having had the opportunity to make a systematic study of the physical characteristics and physiological effects of the agents used by the physical therapist, the average medical student obtains little of real value from a cursory survey of clinical physical medicine. For this reason, many patients needing physical therapy, continue to be diverted to irregular practitioners, or are allowed to become the patients of physical therapists.

If physical medicine centers develop as fundamentally as signs now indicate they may, the correction of defects in medical education in this sphere will follow automatically. In the interim, which is almost certain to be long, medical schools might profitably attempt to assess their responsibilities in the overall planning of technical education. This should be so flexible in outlook, curriculum emphasis, and administration as to foster an insensible replacement of the technician's discretionary latitude by full and detailed medical control of the management of the patient. The risks and deficiencies inherent in current practices are too important to be ignored at a time when social pressure demands an increased medical responsibility for the rehabilitation of the physically disabled.

Postgraduate Courses for British Doctors

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During recent years, the reform of medical education in the United Kingdom has been keenly discussed both by the leaders of British medicine and by the rank and file of the profession. The demands of World War II which made necessary the creation of new forms of medical service, and the introduction of the National Health Service, have been two of the most important of the influences which have stimulated recent thought upon this subject. Fundamental reforms in the education of both the medical student and the qualified practitioner have been proposed, among the most important of them being the recommendations made by the Interdepartmental Committee on Medical Schools appointed by Britain's Ministry of Health and the Department of Health for Scotland. The report of this committee, which is usually known as the Goodenough Report, was published in 1944, and it contains an abundance of valuable information about Britain's medical education which is based upon the evidence given before the committee by the wide variety of medical men and educationists who were consulted.

Here we are concerned only with postgraduate education and the reforms of this which have been proposed will be better understood if we first glance at the system of postgraduate medical education which was in operation at the time when the Goodenough Committee were making their inquiries. This system has not yet been substantially altered, although at least one important reform, which is indicated below, has already been effected. The present system may be considered under two headings—the education of the general practitioner and the training of the specialist and consultant. For the education of the general practitioner there have been, and still are, both in London and in other centers in which medical schools and large hospitals exist, lectures, films, demonstrations of technical procedures and similar forms of postgraduate education.

REFRESHER COURSES

There have also been what are called refresher courses, which organized courses of instruction lasting usually about two weeks; they are specially designed for the practitioner and have served a very useful purpose. These refresher courses are advertised from time to time in the leading medical journals. The Goodenough Committee recorded its opinion that the refresher course should be regarded as a temporary expedient only and that a more continuous and better organized system of instruction should be available to practitioners. It recommends that refresher courses should be designed by the medical schools, that they should be more widely distributed throughout the country, that they should be

given only by teachers whose ability and experience has been approved and that, if they are made compulsory to the practitioner, his expenses while he is attending them should be paid, including the cost of any locum tenens who has to be engaged. This committee would prefer, however, to have courses of instruction organized which would bring the practitioner into regular and more personal contact with the specialists and with the work of hospitals by offering clinical assistantships which practitioners could hold in the hospitals. The committee rightly attach great importance to the personal contact of the consultant and the practitioner.

It is clear that a policy of this kind would be welcomed by most of Britain's practitioners. One of its basic difficulties is, however, the provision of enough experienced teachers to provide the whole country with an even distribution of postgraduate instruction of the requisite high quality. The training of specialists who would give the postgraduate teaching both to practitioners and to others becomes, therefore, a question of basic importance. To it the Goodenough Committee, and other responsible medical bodies also, have given a good deal of anxious thought. The problem has recently acquired additional importance, because the National Health Service will create a demand for many more specialists. The White Paper which explains this service points out that consultants must be available at all the regional centers from which the service will be operated, that more doctors of the right type must be encouraged to become specialists and that they must be adequately trained and remunerated. Because the Government has accepted the main recommendations of the Goodenough Report, a glance at the recommendations for the training of specialists will give us an idea of possible future developments.

The Goodenough Committee rightly consider that the existing system by which specialists are trained is inadequate and incomplete. Normally the intending specialist holds clinical and other appointments at hospitals which may or may not be associated with university medical schools. In due course he obtains a higher qualification of one of the Royal Colleges (Physicians, Surgeons, or Obstetricians and Gynecologists) or a higher medical degree of a university or one of the 40 or more diplomas which are offered after examination by various bodies when a certain period of training in a particular specialty has been carried out. The higher qualifications obtained by a specialist may therefore represent variable standards of attainment and a standardization of these is clearly required. One of the most important of the recommendations made by the Goodenough Committee is, in fact, the one which proposes a central organization to control the qualifications of the specialist.

TRAINING FOR SPECIALIZATION

This committee further recommended that no doctor shall become a specialist until he has attended, for a period of four to five years after his admission to the Medical Register, an approved course of instruction taken in approved institu-

tions. Part of the period of instruction should be devoted to training in anatomy, physiology, pathology or other branches of science ancillary to medicine. An important recommendation is that the training of specialists should be adequately supervised by senior colleagues. The trainee should also have ample time for meditation and research and should not be overburdened by routine duties. He should be paid while he is training and there should be opportunities for general practitioners to become specialists; the gaining of experience abroad should be encouraged. Specialists should obtain either one of the higher university qualifications in medicine or a higher qualification of one of the Royal Colleges.

With most of these recommendations the majority of medical men will agree. Time will, however, be required to put them into operation. Meanwhile, one important step towards the organization of postgraduate medical education in London has already been effected. The University of London is planning an extension of its postgraduate instruction and has established the Postgraduate Medical Federation, whose function will be the development and coordination of postgraduate medical education in London as a whole. The Director of Federation is Sir Francis Fraser, who was formerly Director-General of the Emergency Medical Service, which introduced many admirable features into medical practice during World War II. To Sir Francis the modeling of the Federation has been largely due. It will, during the coming year, coordinate the work of the British Postgraduate Medical School, the Institute of Child Health at the Hospital for Sick Children, the Institute of Neurology, the Institute of Laryngology and Otology at the Royal National Throat, Nose and Ear Hospital, the Ophthalmic Institute at the Royal London Ophthalmic Hospital, Moorfields, and the Central London Ophthalmic Hospital, all in London. Other institutes will be established with the help of various hospitals which specialize in dermatology, psychiatry, orthopedic surgery, diseases of the chest and those of the genito-urinary system and the heart. Clinical instruction will be arranged at several London hospitals.

FEDERATION'S TASK

The task of the Federation will be a difficult one. It will not be easy to provide the kind of organized, continuous and disciplined postgraduate instruction which will in the future replace the excellent but more diffuse training which has produced so many eminent British specialists. Medical men with many different interests will be presenting themselves both from Britain and from overseas in search of the more advanced education which they require. The life work of many of them will be bound up with the wide sweep and scope of the National Health Service, which does not, we should remember, exclude private practice. Numbers of medical men from the overseas countries of the British Commonwealth will require special instruction and the Nuffield Foundation has generously provided postgraduate Fellowships for those who come from the Dominions and India. It is not surprising, therefore, that a warning has

been issued that the accommodation available at present will hardly be adequate to the demands which will be made upon it. The Federation has, however, a director whose wide experience will be invaluable. It sets out on its task with the goodwill of the whole profession and the knowledge that many medical men outside London will follow its progress with friendly criticism and hope. For the director of the Federation has set before himself a wider and greater task than the organization of postgraduate medical education in London.

He has told us of his plan for the creation, through the instruction to be provided in London, Edinburgh and other academic centers in Britain, of an International Postgraduate Medical Federation, which will attract to its services medical men from all over the world. This is a great conception from which nothing but good can come. If the work of the International Postgraduate Medical Federation is linked with that of the World Health Organization of the Economic and Social Council of the United Nations, with the plans of the youth of the medical profession, who are already making international contacts through the British Medical Students' Association and with the plans of other scientific associations, much more may result than the control of disease and all the suffering that it causes. The final result may well be the establishment, upon the firm basis of the service of man by his fellowmen, of that world peace and cooperation for which so many men and women, whatever their work or training, are striving by every means within their power.

How Much Time Should Be Allotted to the Teaching of Health Economics*

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The answer to "How Much Time Should Be Allotted to the Teaching of Health Economics" is not found in the literature. Only one article relating to this subject has appeared in the *JOURNAL OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES*.¹ If the question is to be answered intelligently, it is necessary, first, to present my own concept of the field of health economics. It will then be possible to indicate the minimum amount of time that will be required to present the subject.

Relatively few medical schools include courses in the field of health economics, judging from a perusal of their catalogues. This is not in accord with the final report of the Committee on the Teaching of Preventive Medicine and Public Health² which states that at least 33 schools teach economic and socio-logic aspects of disease. Their information was obtained from questionnaires sent to all medical schools and not from medical school catalogues.

If we admit the need for teaching health economics, as does the Committee on the Teaching of Preventive Medicine,² many schools must squeeze still another course into an already overcrowded curriculum or cut down on subject matter in preventive medicine in order to include this field. It is generally agreed that not enough time is given to preventive medicine, so that the latter alternative does not seem practical. If preventive medicine accounted for 4 per cent of the curriculum time as recommended by the Association of American Medical Colleges and the Council on Medical Education and Hospitals of the American Medical Association instead of the actual average of 1.9 per cent, there would be less concern about where the time could be found for such a course.

Excellent courses are given to professional public health students at Yale, Michigan and other schools. Courses of this length are not feasible in the medical curriculum.

At the University of Colorado, we offer an elective 10 hour course in health economics. This is too short a period, but as a result of this experience, certain definite ideas have crystallized as to what should be presented and how long it would take.

Medical students come to us very poorly prepared in certain important particulars. They have had a great deal of biology and chemistry but little or noth-

* Read before the Conference on Preventive Medicine and Health Economics, Ann Arbor, Michigan, held September 30-October 4, 1946.

ing in the economic and social sciences. They lack a real consciousness of the social forces operating in our society today. The idea that medicine is also a social science is strange to them. It is interesting that many undergraduate colleges and universities are offering courses in the field of social medicine or including the subject, however inadequately covered, in other courses in economics, government and sociology.⁸ In our experience, very few premedical students have ever taken such a course.

Our graduates leave the school with the knowledge of how to diagnose and treat disease in the individual, but not with the facts essential to diagnose and treat a sick and ailing society. To overcome such a handicap in one short course in medical school is impossible. This basic deficiency must be corrected during the premedical years. We can help our own cause, however, by considering the social as well as the scientific aspects of the subject matter of preventive medicine. We should not try to teach modern preventive medicine and public health without a discussion of the economic and social problems involved. For example: how many of us consider the many social, economic and political forces that are operative in adequate housing; or are we satisfied by a mere factual presentation that good health is related to good housing?

The reasons are clear to all of us why preventive medicine should be taught in each of the four years of school. We do not suddenly expose an unprepared student body to the subject matter of health economics if we include the social, political and economic aspects of preventive medicine in our teaching. It will not be an isolated course, but one for which the students have been prepared carefully. The subject should be integrated into the fabric of every course we teach. Even though a separate presentation is necessary, its length will depend on how it has been dealt with in other courses the student has taken.

Dr. Franz Goldmann¹ has outlined an excellent medical school course as follows:

1. Economic and social developments during the last decades and their bearing on medicine.
2. The supply of physicians' services.
3. The supply of hospital services.
4. The extent and costs of medical care.
5. Recent developments in organization of medical care.
6. Proposals actually under consideration.

These topics would serve as a necessary prerequisite to what I think should follow. At least 10 hours should be devoted to such a discussion.

This series would be followed by a presentation of the development and operation of some of the foreign medical plans such as those in Germany, England, France, Denmark and in parts of Canada. Such a discussion is not to be undertaken with the idea that these plans are desirable or necessary for the United States. We have many lessons to learn from them and if we as physicians intend to talk about such plans in relation to our own problems, we should know some-

thing about them. Whenever the subject of medical economics is discussed, talk invariably turns to foreign medical plans, yet neither the students nor the doctors seem to have a clear understanding of them. We must trace for the student the background of how and why these plans were adopted, their advantages and disadvantages in terms of their own particular problem and what their own physicians, health workers and populace think of them. If one may judge, for instance, from what appears in the English medical journals, most doctors in the United States are sadly misinformed about how their English confreres feel toward their own medical insurance plan.

Four hours could easily be allotted for a general survey of foreign medical insurance plans.

I would conclude the course by inviting a group of available outside speakers to discuss various phases of health economics. As many points of view as possible should be included. With the previous background, the students can be more critical of what the speakers have to offer. Each medical school will have to work out a schedule for itself, depending on prevailing conditions and the available local talent. Most schools would have little difficulty in obtaining the services of someone competent to speak on the following subjects.

1. The Blue Cross, its aims, objectives and techniques of operation.
2. How organized medicine plans to meet medical needs in our modern society. This would include a discussion of any local voluntary prepaid medical society plan.
3. Local medical plans operated by industry, cooperatives, the Farm Security administration, etc.
4. The position of the labor unions in relation to the problems of medical care.

The CIO and the AFL have speakers with a carefully worked out analysis of the problem. Medical students should be exposed to this point of view. It comes as somewhat of a surprise to many of them that these large unions, representing millions of people, believe that there is something wrong with the present economic aspects of medical practice.

Each teacher responsible for the subject may also find in his particular community excellent talent on other phases of the problem. It must be made clear to all outside speakers that their opinions are not necessarily those of the instructor or of the school. Six hours can easily be devoted to this activity.

Dr. Duckett Jones⁴ of Harvard has presented a course in health economics through the medium of outside speakers of national reputation. There are several objections to such a procedure. Each speaker finds it necessary to develop the basic facts on which to predicate his arguments. This takes too much of the speaker's time that might be used to better advantage in developing his own point of view. Neither does it give the student the extensive background that he must have to properly evaluate the arguments presented. The cost of such

a procedure would make it an impossible technique for many schools. Possibly, one of the Foundations might be induced to subsidize a group of speakers and make these men available to us. Such a plan would present many difficulties of scheduling. The more important objection would be that these speakers might be used in lieu of a well organized and coordinated course.

CONCLUSION

In conclusion, I have suggested a course in health economics of 20 clock hours. The essential elements would include:

1. A presentation of the basic facts relative to medical care in the United States.
2. A discussion of the evolution and operation of selected foreign medical insurance plans.
3. Possible solutions to the problems of medical care in the United States as envisioned by a group of outside speakers.

With such a course, the student should be able to evaluate the problems of a sick world as well as a sick individual provided he has had a proper pre-medical background and as a result of his medical courses comes to the realization that medicine is also a social science.

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The Education of the Doctor in Social and Moral Responsibility*

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My basic assumption is that a doctor is an applied scientist, i. e., that medicine is both a science and an art, a science in its necessary reliance on all relevant scientific knowledge, and an art in the application of this knowledge to human beings in a human society. It is commonly admitted that prospective doctors receive very rigorous scientific training, but it is my impression, and that of many others, that they are not trained in the "art" of medicine in anything like as rigorous or effective a manner. What I have to say relates to why such training is important and how it might be improved.

Such training is important because the "art" of treating people as human beings is not achieved by mere acceptance of conventional standards or by subjective intuition. It too requires its appropriate discipline—the development of man's capacity for responsible judgment. It is axiomatic that an ideal doctor would thoroughly understand his patient's body, in the light of all relevant modern science. It is coming to be recognized that he should also understand the workings of his patient's mind in the light of modern psychology and psychiatry. But it is usually forgotten in the formal education of a doctor that he should also understand, as well as possible, his patient as a complete human being with his socially conditioned, yet individual, hopes and fears, beliefs and aspirations, living in a complex society whose forces impinge on him in many conflicting ways.

What is this "total human being" whom the doctor should understand? He is, among other things, (a) a person who is continually being compelled by circumstances to make moral, aesthetic and religious value judgments. These judgments may be explicit or implicit, affirmative or negative, honestly focussed on the problem or evasive; and all these judgments concern controversial issues regarding which no absolute certainty or proof is possible. He is (b) conditioned to judge as he does by complicated physiological, psychological, social and cultural factors. Yet he is (c) in some meaningful sense a free and responsible moral agent in many of his choices and actions. What, in view of all this, should be the doctor's attitude toward him as a human being?

Man is also a being who can and should develop through three stages—from childhood, where his attitude is characterized by a sense of insecurity and

* Summary of talk to the Institute on Medical Education, April 16, 1947, sponsored by the New York Academy of Medicine.

a craving for certainty and authority; through adolescence, characterized by an attitude of independence and rebellion against authority; to maturity, which is characterized by a recognition that nothing is certain, but that none the less it is possible to be more rather than less informed, and that man's proper attitude is one of reflective commitment. If men are judged by reference to these three stages, it is clear that many men never really outgrow the first stage and remain "childish," while others do not get beyond the second stage and remain perpetual skeptical and rebellious adolescents, and that genuine maturity is rare and hard to achieve. It is also clear that men tend, in periods of sickness and crisis, to revert temporarily to a lower level and that this fact presents the doctor with distinctive problems. Finally, men can achieve maturity in one region of endeavor, e. g., in science, and remain childish or adolescent in other regions, e. g., in politics or religion.

Man is also essentially a social being more or less identified with many overlapping social institutions and subject to social forces and conventional standards which often conflict. Many of his problems are, therefore, problems of social adjustment, and this, in turn, poses a new set of problems. To what extent should an individual conform to the demands of his society? How should he choose between conflicting pressures? When should he presume to sit in judgment on society and seek to reform it? And by what means, and by reference to what standards, should reforms be undertaken? All these questions must continually arise in medicine, both with regard to the doctor's own attitude to society and in his estimate of, and advice to, his patients.

If this analysis is at all correct, the ideal training of a doctor should certainly include the most effective education that can be devised to help him to become mature and to deal with his patients and their problems of social adjustment as maturely as possible. This involves, first, more time for such training and more recognition by the medical profession of its importance. At present, medical schools require, quite naturally, a great deal of premedical scientific training, and they may be tempted to increase this requirement. Though such training is, of course, essential, it should not be allowed to preclude, in college, proper training along these other lines. It is even more important that medical schools should convince their future students that they really attach importance to their nonscientific education.

This, however, will not suffice. It is not enough merely to specify that so much work be done in the social studies and in the so-called humanities, because these disciplines are also highly specialized today and because many courses in these subjects are of little or no use to premedical students. They should be judged, in each college or university, by reference to the approach, method of instruction, and basic outlook of the professor. The criterion should be their potential contribution to the development of real maturity and capacity for responsible value judgments.

In most colleges and universities, premedical students at present receive competent advice on their scientific training by specially appointed faculty advisers. Each student should also have an equally competent nonscientific adviser who, in cooperation with the scientific adviser and also in close touch with medical schools, should advise him on his nonscientific studies. I would urge strongly the appointment of a committee of doctors, college administrators and non-scientific professors to study this problem of the training of doctors for social and moral responsibility.

The present neglect of such training has serious results. These can be illustrated by the skeptical relativism of many doctors on moral and social questions. They fall into such relativism in reaction to an authoritarian absolutism, not realizing that there is a mature middle ground between these two extremes. It is also exemplified in medicine, as in other professions, by an occasional lack of professional attitude. This may be defined as the attitude of the man who seeks to put his abilities and training first and foremost at the service of society. Much can be done to inculcate in students such a social consciousness, but a random sampling of "liberal arts" courses in college will not suffice to achieve this end. Hence, my hope that medical schools will give this problem far more serious attention.

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FRED C. ZAPFFE, Editor

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Ewen M. MacEwen

On September 2, 1947, Ewen M. MacEwen, chairman of the Executive Council of the Association of American Medical Colleges, succumbed to a heart attack. Dr. MacEwen had been ill since May—when he sustained the first attack. Born in Prince Edward Island, Canada, in 1885, he came to the United States in 1899. He attended various colleges in Iowa and received the M.D. degree from the University of Iowa in 1912. He chose teaching as a career, confining his activities to anatomy. He served in the department of anatomy at Iowa in various capacities and became head of the department in 1931. In 1935, he was appointed dean of the College of Medicine.

Dr. MacEwen was very active in communal affairs but his professional interest, aside from anatomy, lay mostly in the field of medical education. He was a member of the Executive Council of the Association for many years; president in 1943-44, and chairman of the Executive Council since 1944. He was very active in promoting the affairs of the Association and took a keen interest in medical education generally. Dr. MacEwen was also president of the Advisory Council on Medical Education.

Dr. MacEwen had endeared himself to all his associates. His suggestions were also listened to carefully and usually were followed. We note his passing with extreme sorrow and will miss him in our deliberations. R. I. P.

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The Borden Award for 1947

In 1945, the Borden Foundation offered the Association of American Medical Colleges the opportunity to make

an award to a member of the faculty of a medical college in membership in the Association for original research in some field of medicine. This award was to consist of a gold medal and \$1,000 in cash. It was to be made for a period of five years but the award did not need to be made if no one was deemed worthy of the honor.

The Association appointed a committee to carry on the work of selecting a qualified person to receive the annual award. This committee consisted of the following personnel: Dr. E. A. Doisy, St. Louis University, chairman; Dr. James McNaught, University of Colorado; Dr. Brian Blades, George Washington University; Dr. John B. Youmans, University of Illinois; Dr. Charles Best, University of Toronto.

The committee received twenty-nine nominations for the award. The rules and regulations governing the work as set up by the committee have been published in the JOURNAL and were sent to the deans and heads of departments of all member medical colleges, hence need not be repeated here. For the 1947 award the committee has selected Dr. Vincent du Vigneaud, professor of biochemistry in Cornell University Medical College, from a field of twenty-nine nominees. Professor du Vigneaud has been an active investigator in biochemistry for more than twenty years. Noteworthy contributions have been made to the chemistry of insulin, sulfur containing amino acids and biotin and to the nutritional significance of amino acids containing sulfur. In this latter work he demonstrated the importance of the methyl group and its role in transmethylation.

The work for which the Borden award was given was (1) a continuation

of his investigation of biotin and of transmethylation; (2) a demonstration based on the use of isotopes of the mechanism of the conversion of methionine to cysteine, and (3) the synthesis of penicillin G. Although other investigators using synthetic methods had obtained minute yields of antibiotic activity as measured by bioassay, du Vigneaud and his associates improved the methods of synthesis, purified the product, isolated the crystalline antibiotic and demonstrated conclusively that penicillin G had in fact been produced by synthesis.

Nominations for the second award should be sent to the secretary of the Association, 5 South Wabash Avenue, Chicago 3, Illinois.

* * *

Cecil U. (or N.?) Dunlap: Warning

One Cecil U. (or N.?) Dunlap has been applying to a number of medical schools for admission on the basis of credentials and a letter, both of which are forgeries. Dunlap received the B.S. degree from Ohio University, Athens, in 1943. According to records on file in the office of the Association of American Medical Colleges he entered Wayne University College of Medicine in 1943 and was dropped at the end of that year. In 1944, he entered George Washington School of Medicine as a freshman. Apparently, he did not say that he had been dropped by another medical school. At the end of the second year at George Washington he was dropped for unsatisfactory scholarship. A letter signed by Dean Bloedorn informed Dunlap of that action.

Now Dunlap is applying to other medical schools for admission. He presents a letter ostensibly signed by Dean Bloedorn stating that he is eligible for admission to the junior year. Of course, that letter is false and the signature a forgery. All medical schools are warned to be on the lookout for this man.

Many similar instances have occurred in the past. The office of the Association has very complete records of all medical students and checks enrollment blanks with meticulous care in order to

detect repeaters, especially if they are not listed as such by the reporting medical school—as is frequently the case. In that event, the school is notified of the student's record so that it can make a check of his credentials. Not only letters, but signatures and college seals have been forged, sometimes so well as to defy detection. Only the fact that the records in this office disclose the forgery has made it possible to make the detection. However, since the medical schools apparently did not value this service given by the Association, notification was discontinued a few years ago, but the records in the office are kept up as before. Any medical school wishing information on a doubtful case, may be able to secure what it wants by requesting the information from the Association office. It is one of the many services which the Association has rendered for many years.

* * *

Sun Valley Meeting

It is safe to say that the Fifty-eighth Annual Meeting of the Association of American Medical Colleges, held in Sun Valley, Idaho, was one of the most enjoyable in the history of the Association. The location was ideal. The weather was perfect. The services, including the accommodations and the personnel, deserve the highest commendation. The program was very well received; it differed from programs of previous years in that it dealt with subjects, in the main, which have not been discussed for some time. The attendance was very good; more than 200 registrations were recorded. Five of the medical schools in the United States, and seven Canadian medical schools found it impossible to send a representative to the meeting. However, many of the schools had more than one representative present. All the Government medical services: the Army, the Navy, Public Health Service and the Veterans' Administration, were represented; and these representatives took an active part in the proceedings of the Association. It was voted that the Surgeons General of all these services appoint a Liaison Officer who will attend

all meetings of the Association and of the Executive Council.

It should also be mentioned that the arrangements made to send as many of the delegates as would pass through Chicago on the way to Sun Valley and return, on special trains provided by the Union Pacific Railroad, gave an excellent opportunity to get well acquainted and to enjoy a rather long trip together. The hope was expressed that this arrangement would be made for future meetings. The fine cooperation of the railroad made possible this arrangement.

* * *

*Association of American Medical Colleges
Officers: For 1947-1948*

At the Fifty-eighth Annual Meeting of the Association of American Medical Colleges, held in Sun Valley, Idaho, October 27-29, 1947, the following officers were elected for the ensuing year: President-elect, J. Roscoe Miller, Dean, Northwestern University Medical School; Vice-President, George Packer Berry, Associate Dean, University of Rochester School of Medicine; Secretary, Fred C. Zapffe, Chicago; Treasurer, A. C. Bachmeyer, Associate Dean, University of Chicago Medical School. Dr. Walter A. Bloedorn, Dean, George Washington University School of Medicine, and President-elect, assumed the Presidency.

Members of the Executive Council: L. R. Chandler, Dean, Stanford University School of Medicine; Ward Darley, Dean, University of Colorado School of Medicine. The other members of the Executive Council are W. C. Davison, Dean, Duke University School of Medicine; Joseph C. Hinsey, Dean, Cornell University Medical College; Wm. S. McEllroy, Dean, University of Pittsburgh School of Medicine; the President; the President-elect, and the Vice-President. Doctor Hinsey was elected Chairman of the Executive Council.

The place of meeting for 1948 has not yet been selected; however, it will doubtless be some place in the East.

Fellowships, Funds and Prizes Pamphlet

In 1934, the Association of American Medical Colleges published the second edition of a pamphlet entitled "Fellowships, Funds and Prizes for Graduates of Medical Schools in the United States and Canada." Because of lack of funds, it was not possible to issue another edition of this pamphlet. Since 1934, so many requests for the pamphlet have been received that it was decided at the Sun Valley meeting that a third edition be published.

This pamphlet contained complete information on all such opportunities available to graduates in medicine. Since then many new Foundations have been formed, many new opportunities for study and research have been made available. Therefore, the revision of this pamphlet is not a small undertaking and the help of every one connected with medical education must be had. In the near future, work on the pamphlet will be begun. Every possible source of information will be contacted directly by the Association, nevertheless, it is possible that some source may be overlooked, hence this appeal for help.

* * *

History of the Association of American Medical Colleges

Again, it has been voted that a history of the Association of American Medical Colleges should be written. The Secretary of the Association has been given the job of writing this history because of his long connection with the Association. Anyone who has any contribution to make, please do so by writing to the Secretary. Time dulls memories. Any help given will be appreciated.

* * *

Application Study for 1948

Many requests are being received for application cards for students seeking admission to the 1948 classes of medical schools. Member colleges are requested to report to headquarters of the Association the number of cards they will need so that a proper supply can be

printed. The need for these cards is much greater than it has ever been, therefore this information is needed.

* * *

Liaison Officers from Government Medical Services

The following resolution was passed at the Sun Valley meeting of the Association:

WHEREAS, the Association of American Medical Colleges is anxious to be of service to the Army, Navy, Public Health Service and other agencies in any plans which affect medical education at any level.

Be It Resolved, that they be invited to discuss these plans with the Association in the interest of expediting their program, and further,

Be It Resolved, that the Surgeons General of the Army, Navy, Public Health Service and the Chief Medical Director of the Veterans Administration appoint an official liaison officer to meet with the Association of American Medical Colleges.

* * *

The Veterans Administration

In view of the possibility that General Omar N. Bradley, Administrator of the Veterans Administration, may be assigned to other duties, the Association of American Medical Colleges adopted the following resolution:

WHEREAS, it has been reported that General Omar N. Bradley, Administrator of the Veterans Administration, may be ordered to other duties, and

WHEREAS, Dr. Paul R. Hawley, Chief Medical Director, has demonstrated his outstanding administrative ability by establishing an excellent medical service in the Veterans Administration, and

WHEREAS, the continuance of this program is essential to the best care of the veterans, therefore

Be It Resolved, that the Association of American Medical Colleges in their annual meeting, held October, 1947, representing the medical colleges of this

country, strongly endorse and urge the appointment of Dr. Paul R. Hawley as the Administrator of the Veterans Administration if General Omar N. Bradley is ordered to other duties.

* * *

ROTC Units in Medical Schools

It was reported that the Army is proceeding with the development of these units in forty-three medical schools and in some instances are establishing the unit independently and without consultation with the administrative officer of the medical school in advance. The Association of American Medical Colleges therefore recommended the following:

Resolved, that it is the feeling of the Association of American Medical Colleges that the organization of affiliated reserve hospital units would be facilitated by the appointment of only the chiefs of services at this time.

* * *

Veterans Administration Program

In connection with the teaching programs in veterans hospitals affiliated with medical schools, the Association of American Medical Colleges was informed that in some instances there is confusion and delay in carrying out some activities on the part of non-medical personnel, hence adopted the following resolution:

WHEREAS, the concepts, plans and accomplishments of Dr. Paul R. Hawley for an outstanding medical service for veterans are highly endorsed, and

WHEREAS, the medical schools have had repeated examples that the carrying out of this program has been delayed by non-medical personnel of the Veterans Administration, therefore, be it

Resolved, that the Association of American Medical Colleges, representing the medical colleges of the country, strongly urges that the Department of Medicine and Surgery of the Veterans Administration be given the entire control and responsibility for the supply, construction and finance departments, as they apply to medical activities.

College News

*University of Illinois
College of Medicine*

Applications for admission to the University of Illinois College of Medicine for 1947-48 have reached an all time high, but the school is unable to increase its enrollment because of limited classroom and hospital clinical facilities. The college can enroll only 630 students for the current year, the same number that received instruction last spring. The fall semester commenced on September 30. One thousand and thirty-two candidates have been interviewed by the college of medicine with 167 accepted for admission. A total of 719 residents of the state of Illinois were found qualified for admission. All qualified applicants compiled averages of 85 per cent or better for the three year premedical college course.

Dr. Percival Bailey has been promoted to the rank of distinguished professor of neurology and neurological surgery. Dr. Milton Tinsley, instructor in neurological surgery, has been promoted to the rank of assistant professor. Dr. Myron C. Benford has been promoted to assistant medical director of the University of Illinois hospitals. He previously served as head of the outpatient department. In his new capacity, Dr. Benford will assist Dr. John B. Youmans, dean of the college of medicine and medical director of the hospitals. The hospitals with a combined 485 bed capacity have been operated by the University of Illinois since 1941 in the Medical Center District. Eugene L. Lopez has been appointed director of clinics at the University of Illinois hospitals. Mr. Lopez will have charge of the university's 22 outpatient clinics. Patient visits to the clinics totalled 139,890 for the past fiscal year. Establishment of a post-graduate division for administration of widely differing kinds of advanced teaching is announced. The new division is designed to improve the character and

quality of postgraduate teaching. It also will facilitate the extension of post-graduate teaching to physicians residing outside of the Chicago area. At least 11 courses will be offered by the post-graduate division during the 1947-48 school year. Courses are expected to include instruction in ear, nose and throat, diseases of the eye, basic neuropsychiatry, basic medical science, dermatology, pediatrics and allergy. Most of the classes will be conducted for nine months' duration, although several short courses, ranging from two to 12 weeks, will be offered.

More than 150 physicians received instruction in the postgraduate courses last year. The program is conducted separately from the graduate school.

The University of Illinois broke ground September 26 for the erection of a \$400,000 laboratory for the study of physical environment in health and disease.

The laboratory, to be known as the Aero Medical and Atmospheric Institute, will be equipped with apparatus for the study of aviation medicine, and the study of cold, heat and barometric changes of the body.

Dr. A. C. Ivy and Dr. Gordon B. Fauley have been granted a patent on a composite cream which protects the skin against extremes of heat and cold. The cream or ointment was designed originally to prevent flash burns from explosions aboard ships and in other confined spaces, such as tanks and gun turrets. The product will provide a degree of protection afforded by none other known for this purpose. The ointment, especially valuable in industrial occupations, makes a smooth, even coating which does not rub off. It is nontoxic, nonallergic, and nonirritating to the human skin and may be removed by soap and water. The most important ingredient of the cream is titanium oxide, and the preferable solvent is isopropanol "which normally

evaporates with the resulting production of a hard but flexible film." Ingredients also include a lubricant, such as magnesium stearate, and in diminishing quantities, linseed oil, borax, and other "component agencies."

A 12 months postgraduate course designed to train specialists in allergy will be offered to six physicians during the 1947-48 school year. The course represents a comprehensive program for clinical training and research in allergy. It will be offered by the university's allergy unit, a joint organization of the colleges of medicine and pharmacy. The course, though primarily clinical in scope, will include instruction in basic subjects related to allergy. The training and research program will be correlated with the university's allergy clinic which cared for 11,103 outpatient visits during the past year.

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*University of Colorado
School of Medicine*

New Appointments: Dr. Joseph H. Holmes, of Columbia University, associate professor of medicine and director of postgraduate training in the basic sciences. Dr. James A. Stapleton, surgeon in the Tumor Clinic. Dr. John M. Foster, head of the department of surgery succeeding Dr. George Packard, resigned but who will continue as professor of surgery; Dr. Edward Stewart Taylor, professor and head of the department of obstetrics and gynecology, succeeding Dr. Clarence B. Ingraham, retired after 30 years of service.

Promotions: Dr. Hugh M. Kingery, professor and head of the department of visual education; Dr. Jules Coleman, associate professor of psychiatry; Dr. Elwood E. Baird, assistant professor of laboratory diagnosis.

A training school for medical record librarians will open Jan. 1, 1948. The 12 months course is open to students who have completed two years of study in an accredited college or university and are proficient in shorthand and typing. Graduates of the course will receive a certificate in medical record library science

and will be prepared to take an examination leading to certification as a registered medical record librarian.

The course, which is one of twelve being offered in the United States, will include three months of theory, taught by lectures and demonstrations, and thirty-eight weeks of internship, giving the student opportunity to learn the practical phase of medical record library science.

A limited number of scholarships will be available, based on need and past academic record. Ruby M. Williamson, R.R.L., medical record librarian, Colorado General Hospital, will be in charge of the course.

The work of University of Colorado scientists in attempting to solve the mystery of cancer was aided today with the receipt of a \$10,000 grant for research from the National Cancer Institute of the U. S. Public Health Service. The grant, made to Dr. Richard Mulligan of the pathology department of the university's Medical Center here, will finance the fifth cancer research project conducted by the university and brings the total amount of money for the studies to \$21,618.20. Much of Dr. Mulligan's research will deal with the study of tumors which occur spontaneously in dogs and which are found at operation or autopsy. The program will be carried on in cooperation with veterinarians in the Denver area.

The renewal of a \$1,000 grant from the Anna Fuller fund was made recently to Dr. Berta Scharrer of the anatomy department for cancer research in insects. She also has a grant of \$2,625 from the American Cancer Society to assist with her studies of the effect of nerve injury on the development of insect tumors.

Dr. E. Stewart Taylor, head of the department of obstetrics and gynecology, is conducting research on the artificial production of cancer of the uterine cervix. His work is sponsored by a grant of \$133.20 from the University Council on Research and Creative Work.

On the Boulder campus, Dr. Edward D. Crabb and Dr. Margaret A. Kellsall, assisted by Mrs. Helen K. Wilson, of the biology department, are conducting cancer investigations under grants totaling \$2,860 from the U. S. Health Institute and the University Council on Research and Creative Work. Research in cell growth inhibitors is being carried out by Professors Karl Dittmer and Irving Goodman of the chemistry department as part of the naval research program.

A training school for physical therapists will be set up Jan. 5, 1948. The new school will train specialists in the treatment of injury and disease by use of such physical agents as heat, cold, light, water, electricity, massage and exercise. Dr. Harold Dinken, head of the department of physical medicine at the Medical Center and consultant in physical medicine to the War Department and the Veterans Administration, will be medical director of the new school. Technical director is Miss Mary Lawrence, former officer-in-charge of the intensified physical therapy training program conducted by the Surgeon General's office during the war.

Requirements for entrance to the physical therapy school will be one of the following: graduation from an approved school of physical education; graduation from an approved school of nursing; completion of three years of approved college work with satisfactory science courses. Applications for admission to the school are now being accepted.

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*University of Washington
School of Medicine*

Construction work amounting to \$9,000,000 is now under way. Affiliations have been completed with King County Hospital (unit No. 1, general 454 beds, unit No. 2, geriatrics 275 beds), U. S. Marine Hospital (400 beds), Children's Orthopedic Hospital (117 beds), King County Tuberculosis Sanatorium (265 beds) and potential affiliations with other institutions for certain types of work are now being studied. The heads

of the departments of medicine and surgery at the University Medical School officially become heads of the respective services at King County Hospital. The program of staff organization is one of joint responsibility between the hospital and the medical school. Dr. Roscoe L. Pullen, associate professor of medicine, has been appointed medical director of King County Hospital and holds this post as a joint appointment of the hospital and of the school of medicine. One of the surplus buildings from Payne Field has been transported and installed adjacent to King County Hospital so as to furnish classrooms and office facilities for the medical school.

Dr. Frederick Lemere has been appointed clinical professor and chairman of the division of psychiatry and Dr. Joseph Shaw has been appointed clinical professor and chairman of the division of dermatology. Dr. R. Frederick Becker, associate professor of anatomy, has been appointed acting chairman of the department.

During the past year the medical school has had the following grants-in-aid for research or special projects: The Abbott Foundation granted \$5,000 to the department of pharmacology for fundamental pharmacological research. The American Cancer Society, Washington Division, granted \$7,500 to the department of pathology for an investigation of "Serological Studies in Neoplastic Growth." The Baxter Laboratories granted \$5,000 to the department of anatomy for fundamental anatomical research in connection with the use of pyrogens. The National Foundation for Infantile Paralysis granted the department of anatomy \$7,700 for research in infantile paralysis and McDermott Foundation granted \$5,580 to the department of microbiology for research on "The Nature of the Tuberculin Reaction." The John and Mary R. Markle Foundation granted \$2,100 for research on "Virus Infections of Intraocular Tissues and Lymph Nodes," being conducted by Dr. Charles A. Evans in the department of microbiology.

The Children's Bureau, through the

State Department of Health, has granted \$35,000 for the development of a children's clinic for the children of veteran students which is also to be used as a normal child training center by the school of medicine.

The National Institute of Health has granted \$2,800 to Dr. Russell S. Weiser of the department of microbiology for research in the field of "Antibiotics Effective Against *Mycobacterium Tuberculosis*," \$5,967 to the department of medicine for "Evaluation of Substitutional Sex Hormone During Pregnancy in Diabetic," and \$25,000 to the department of pathology for basic investigation in neoplastic disease.

A grant of \$23,000 has also been received from the National Cancer Institute for the development of a teaching program in oncology.

Peter G. Schmidt and family of Olympia presented the medical school with \$15,000 for the purchase and installation of an electron ultra microscope to be used in investigative studies. This will be installed in the department of microbiology in the new building.

Fifty-two new medical students entered the first year class on October 1. Forty-five second year students returned to the institution on the same date.

* * *

Southwestern Medical College

Another step toward expanding the program of Southwestern Medical Foundation has been taken with the appointment by R. R. Gilbert, chairman of the Advisory Council and president of the Federal Reserve Bank of Dallas, of 11 regional chairmen, each representing approximately 25 Texas counties.

To date the council totals 230 members, each representing a Texas county in the interest of perpetuating medical education and scientific research in the Southwest. Gilbert said that the council will be expanded in the near future to include all five states of the Southwest and that regional chairmen will be appointed in each state.

Citizens of Dallas and the Southwest have contributed \$3,115,000 toward the support of the Foundation. One million dollars of these funds has been set aside to begin construction of a permanent college building in the Medical Center on Hines Boulevard. The remaining amount is being used to operate the college.

The 62-acre campus for the Medical Center was purchased with \$125,000 given by the Hoblitzelle Foundation in memory of Mrs. Karl Hoblitzelle.

In addition to the more than three million dollars contributed by Dallasites and Southwesterners, the Foundation has received approximately \$500,000 in the form of special grants for specific research problems and other purposes, from individuals, pharmaceutical houses, other concerns and foundations.

Three members of the faculty won the top award for scientific exhibits at the fourth International Congress of Obstetricians in St. Louis, Mo. The three are Dr. William F. Mengert, chairman of the Obstetrics and Gynecology Department, and two of his staff members, Dr. R. J. Jennett and Dr. W. C. Eller. Their exhibit demonstrated a new method of pelvic measurement with X-ray, a useful technique in determining whether an expectant mother should prepare for a normal birth or a Caesarian operation.

The display was prepared by Prof. Lewis Waters, chairman of the Medical Art Department, and members of his staff.

A research project in radioactive materials is being inaugurated at Southwestern under the direction of Dr. Allen F. Reid, head of the Department of Biophysics. Dr. Reid also will work with the Buchanan Blood Bank at Baylor Hospital, under Dr. J. M. Hill.

Dr. Allen F. Reid is associate professor and chairman of the department of biophysics.

Dr. James M. Martin, professor emeritus of radiology, died in September.

*George Washington University
School of Medicine*

A two week orientation program for members of the 1947 freshman class is announced. This program, being offered for the first time, is designed to acquaint students with medical terminology and to show them the relationship of medicine with physics, biology, sociology and chemistry. Lectures will also be on evaluation of scientific evidence and basic sciences in medicine. Discussions will follow each address.

Dr. Thomas Peery, director of the university's postgraduate instruction, delivered the first address, titled, "The Medical Student." Dean Bloedorn discussed the "Ideals and Aims of the Medical Profession."

Others who will speak in the series "Sociology in Medicine" are Leo G. Schmelzer, superintendent of the university hospital; Dr. John Parks, professor of obstetrics and gynecology; Dr. Brian Blades, professor of surgery; Dr. Ralph G. Beachley, adjunct professor of public health practice; and Dr. Winfred Overholser, professor of psychiatry and superintendent of St. Elizabeth's Hospital. Dr. Overholser is also scheduled for a series of four lectures on the derivation and usage of common medical words. Another, speaking under the section "Language of Medicine" is Theodore Wiprud, executive secretary of the Medical Society of the District of Columbia, who will discuss problems of medical care distribution and medical economics. Dr. Charles R. L. Halley, clinical professor of medicine, will speak on medical libraries and how to use them, and Dr. John Parks will discuss "Systems of Medical Practice." Dr. Robert Cook, managing editor of the *Journal of Heredity*, delivered two lectures on genetics. Dr. Dale Stewart, curator of physical anthropology, National Museum, Smithsonian Institution, delivered two lectures under this section, "Biology in Medicine." Dr. Louis Bryant Tuckerman, assistant chief, division of mechanics, National Bureau of Standards, discussed "Physics of Light; Optical Instruments."

Other members of the university faculty who will lead discussions in their various fields are: Dr. Warren Andrew, Dr. Leland W. Parr, Dr. Paul K. Smith, Dr. Roger M. Choisser, Dr. Joseph H. Roe, Dr. Ernest A. W. Shepard, Dr. William H. Jenkins, Dr. Lawrence E. Putnam, Dr. Chester E. Leese, Dr. William Stanbro, Dr. Leonard T. Peterson, Dr. Errett C. Albritton, Dr. Paul Calabrisi, and Dr. Thomas McPherson Brown.

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*Columbia University College of
Physicians and Surgeons*

New Appointments: Clinical professor of surgery, Dr. William F. MacFee, director of surgery at St. Luke's. Assistant professors of surgery, Dr. Benjamin Shore and Dr. Paul Calhoun Morton. Assistant clinical professors of medicine, Dr. John J. Keating, president of the Medical Board at St. Luke's; Dr. Albert C. Herring and Dr. Waldo B. Far-num. Dr. Margaret Bevans, research fellow at Goldwater Memorial Hospital, assistant clinical professor of pathology. Dr. Bevans will do full time research work, specializing in the study of arteriosclerosis. Dr. Robert W. Berliner, resident physician at Goldwater, assistant professor of medicine, to serve as research assistant. Dr. James Bordley, III, Mary Imogene Bassett Hospital in Cooperstown, associate clinical professor of medicine, and Dr. Monroe A. McIver, associate clinical professor of surgery. The affiliations between Columbia and St. Luke's, and between the university and the Bassett Hospital, were announced in July.

Columbia has been awarded grants totaling \$39,000 from two New York foundations for further study on the use of glutamic acid. Joint gifts of \$6,500 a year over a three year period were awarded the university by the Rockefeller Foundation and the New York Foundation.

Early this year, three Columbia University scientists reported that evidence exists that glutamic acid may in some

cases boost the mental powers of children who have relatively high I. Q.s, but who also have some organic difficulty such as convulsions due to a form of epilepsy known as petit mal.

The foundations stipulated that the funds be used for work in brain chemistry, which will be carried on by Dr. Heinrich Waelsch at the New York State Psychiatric Institute and Hospital.

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*McGill University
Faculty of Medicine*

A diploma in tropical medicine is to be given by the faculty. During the war years a short course was available to members of the armed forces. As a result of this experience, the curriculum has been revised, and additional facilities provided to give medical graduates a broader training for tropical practice. The course is being conducted by the Department of Health and Social Medicine with the collaboration of other departments in the Faculty of Medicine and the assistance of members of other faculties in the university. Practical instruction and application of the general principles of public health are made possible through the cooperation of the Ministry of Health of the Province of Quebec, the Department of Health of the City of Montreal and voluntary health agencies.

The studies in parasitology and tropical medicine are conducted at the Institute of Parasitology at Macdonald College of McGill University. The teaching collection at the institute is a large and representative one. The final part of the course is a period of specially arranged supervised training in tropical countries. This includes clinical hospital practice and health unit work. This arrangement provides the great advantage of a practical course in clinical and preventive medicine in the tropics following a completed course in theoretical, laboratory and practical work of a more general nature in a temperate climate. On the satisfactory completion of this work the D. T. M. is awarded.

Further information may be obtained by writing the Chairman, Department of Health and Social Medicine, 490 Pine Avenue, West, Montreal, Canada.

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University of Texas Medical Branch

Dr. Alexander Lipschutz, director of the Institute of Experimental Medicine of the Department of Health of the Republic of Chile, recently gave a series of lectures and seminars on the production of fibroid tumors as a result of the maintenance of a continual blood level of estrogenic compounds. He also described the research into antifibromatogenic compounds, most of which have significant antiestrogenic activity also.

The Lederle Laboratories of Pearl River, New York, have given a grant of \$2,500 for the support of studies under the direction of Dr. Ludwik Anigstein on rickettsial diseases.

The Sugar Research Foundation of New York has given a grant of \$3,000 to support research studies under the direction of Dr. W. A. Selle, director of the Biophysics Laboratory, on protection of the liver bicarbohydrate from action of carcinogenic compounds.

Dr. C. C. Grulée, Jr., assistant professor of pediatrics, has been appointed director of the Stewart Home for Convalescent Children. Dr. Charles R. Allen, after completing special studies at the University of Wisconsin Medical School, has been appointed associate professor of anesthesiology.

An outbreak of Eastern equine encephalitis among horses on Galveston Island has been investigated by Dr. Morris Pollard, director of the Virus Laboratory. Doctor Pollard identified the character of the epidemic in East Texas before it struck the lower Gulf Coast. The possibility of transmission to humans is being watched.

Howard G. Swann, Ph.D., associate professor of physiology, has received a grant of \$12,500 from the Army Air Force Laboratories for the support of research on resuscitation.

*New York University
College of Medicine*

Dr. E. D. Friedman, professor and chairman of the department of neurology, retired September 1st as professor emeritus.

The Robert Trubek Fellowship in Rheumatic Disorders: A one year, non-resident fellowship made available by the Robert Trubek Fellowship Committee is open to graduate physicians with at least two years of previous training in internal medicine or its equivalent. Preference will be given to candidates with a background of biochemistry, biophysics, or any of the basic sciences. The Fellowship will combine supervised research and special clinical training in the rheumatic disorders under the direction of Dr. Otto Steinbrocker. The annual stipend is \$2,500. The appointment is renewable for an additional year by mutual agreement.

Applicants should send their educational and professional qualifications to the Robert Trubek Fellowship Committee, accompanied by two letters of recommendation from physicians under whose supervision previous assignments were completed.

All communications should be addressed to the Robert Trubek Fellowship Committee, Fourth Medical Division, Bellevue Hospital, 492 First Avenue, New York 16, N. Y.

A \$75,000 grant from the Nathan Hofheimer Foundation, Inc., New York, has been received with a stipulation that is to be used to establish the Nathan Hofheimer Foundation Laboratories for basic research in psychosomatic disorders. The sum has been added to the New York University-Bellevue Medical Center Fund, whose goal is \$15,575,000.

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*Duke University
School of Medicine*

Dr. William A. Perlzweig has received three months' leave from his duties as professor of biochemistry. He will visit Palestine and act as special advisor to the Hebrew University and the Hadassah Medical Organization in the proposed establishment of a medical school in the University at Jerusalem.

Dr. William W. Hurteau, Davenport, Iowa, has been appointed as an instructor in the department of pathology. Following graduation from the University of Iowa School of Medicine in 1937, he completed an internship and assistant residency in medicine and neuropathology at the Montreal General Hospital; two years of pathology at the Army Institute of Pathology, in neuropathology; a fellowship in neuropathology with Dr.

*University of Cincinnati
College of Medicine*

Dr. Henry L. Woodward, Cincinnati, has retired as professor of obstetrics and director of the department of obstetrics.

Plans for a new instructional unit, an Institute of Industrial Health, have

been announced under which study will lead to the degree of Doctor of Industrial Medicine. The university's Kettering Laboratory of Applied Physiology, Dr. Robert A. Kehoe, director, is the central unit of the institute. Cooperating with the laboratory staff will be faculty members of the university's Colleges of Medicine, Law, Business Administration and Engineering. In addition, a group of physicians in industrial organizations will assist and make available their medical facilities. Applicants for admission will be screened to meet unusually high requirements for entrance and those accepted will be limited in number. The prerequisite for admission is graduation from an approved medical school plus at least two years of training in a hospital accredited by the American Medical Association for training resident physicians. A third year of practical experience in industry is advisable. Plans are under way with a number of industries to give further aid to the institute's program by financing fellowship grants for students. The Kettering Laboratory was founded by gifts from American industry to attack the hazards to life and health presented by new chemical and manufacturing processes.

Walter Freeman at the George Washington University School of Medicine; an administrative service with the 3rd and 9th Armies; and service in pathology at the Brooks General Hospital, Fort Sam Houston, Texas.

A portrait of Dr. W. C. Davison, dean of the Medical School, has recently been finished by the artist Wayman Adams. This is a gift of the medical alumni and was presented to the school at the annual fall symposium held on October 17th and 18th.

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*University of Wisconsin
Medical School*

Dr. Erik Ask-Upmark, professor in general medicine and neurology, from the University of Upsala, Upsala, Sweden, spoke at a meeting of the University of Wisconsin Medical Society held October 15. His subject was "The Spleen and Some of Its Disorders."

The American College of Physicians is sponsoring a course in internal medicine at the Medical School from November 3 through November 14, 1947. Dr. William S. Middleton, dean, is to be the director of that course and officers of instruction will be members of the medical faculty of the university.

This offering is to be extremely comprehensive and inclusive, and it will cover the current concepts as they relate to the problems within the field of internal medicine.

The family of the late Professor James H. Walton made a gift of \$500 to the medical school for the establishment of a University of Wisconsin Medical School Library Building fund. Professor Walton had long been associated with the chemistry department of the university.

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*University of Maryland
School of Medicine*

Eli Lilly & Company have awarded a grant of \$9,000 to Dr. John C. Krantz, Jr., professor of pharmacology, for the purpose of pursuing studies on hyperten-

sion. Dr. Joseph G. Bird has been appointed Fellow to prosecute these studies. The Ohio Chemical & Mfg. Co. has awarded a fellowship of \$3,500 to the department of pharmacology for the purpose of continuing the study of volatile anesthetic agents. Doctor Krantz is in direct supervision of these studies.

The Board of Trustees of the United States Pharmacopoeial Convention has renewed the appointment of Dr. Frederick K. Bell as research assistant in pharmacopoeial problems in the department of pharmacology. The problems of immediate study are the standardization of digitalis and heparin sodium.

Dr. H. A. B. Dunning, chairman of the board of Hynson, Westcott and Dunning, has given \$1,000 to the department of pharmacology. Dr. H. A. B. Dunning has presented an oil painting to the department of pharmacology, depicting the discovery of digitalis by William Withering. Ceremonies of the unveiling of the painting took place on October 6. Dr. C. Jelleff Carr, associate professor, was master of ceremonies.

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*University of California
Medical School*

Three medical students have completed summer apprenticeships under the guidance of practicing California physicians, in accordance with a plan initiated by Dr. William J. Kerr, professor of medicine. The purpose of the plan is to give medical students an opportunity to learn first hand the practical operation of private medical practice. The three students had completed the third year in the medical school.

Dr. Carl M. Bowman, medical superintendent of the Langley Porter Clinic, is in China, where he is scheduled to spend three months in helping to set up the National Neuropsychiatric Institute of Nanking under the auspices of the World Health Organization. It is planned to make the Nanking Institute a training center and focus of teaching and research in psychiatry for all China.

The U. S. Public Health Service has

awarded the University of California gifts and pledges totaling \$315,174 for research on cancer, rodent control, malaria, swimming pool, sanitation, shellfish poisons, peritonitis, techniques for measuring sewage pollution, studies on vitamin deficiencies and the institution of a training program for psychiatrists, psychiatric social workers and clinical psychologists.

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Yale University Medical School

Dr. Horace T. Gardner, instructor in preventive medicine, has been assigned to an Army research laboratory in Germany to continue the joint Yale-Army investigations on infectious hepatitis.

An Army ROTC medical unit was activated at Yale with the opening of the fall term in September. Yale is one of the forty-three medical schools which have set up a similar unit. Major Douglas Lindsey, M. C., U. S. Army, will be in charge of the unit. He has been named assistant professor of military science and tactics and assistant resident in surgery at New Haven Hospital.

Complete reorganization of the department of psychiatry, with emphasis on the newest methods of training mental illness, expanded instruction of medical students and residency training in cooperation with the Veterans Administration, has been announced.

Dr. Frederick C. Redlich has been appointed executive officer of the department. Dr. Burness E. Moore is physician-in-charge of the Outpatient Clinic.

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*Dalhousie University
Faculty of Medicine*

The new Victoria General Hospital, now nearing completion, will add considerably to the teaching facilities of this school. The other clinical facilities now used—the Children's Hospital, the Tuberculosis Hospital, the Infectious Disease Hospital and the Grace Maternity Hospital, are a part of the Medical Center which the university is considering in its plans for expansion. The new

hospital is being erected by the Province of Nova Scotia. The Halifax Infirmary, a private hospital, is also used to some extent, mostly for instruction in the fifth or intern year. Camp Hill, the Veterans' Hospital, is also available.

A Committee on Studies is working on a complete revision of the curriculum with a view to bringing it into alignment with present day trends in medical education. The original building of the university—Forrest Hall—is being remodeled for the department of anatomy at a cost of \$100,000, which is being met by the Province.

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*Stanford University
School of Medicine*

Stanford announces the appointment of Dr. William H. Northway as assistant dean, beginning with the academic year September 1, 1947. Dr. Northway is a Stanford graduate, having received his M.D. degree in 1930. After a period of residency training and teaching experience in the School of Hygiene at Stanford, Dr. Northway has been in charge of physical medicine at Stanford since 1935. At the present time he is an associate professor of medicine in charge of physical medicine and will serve as assistant dean.

The 1947 Lane Medical Lectures will be given November 11th through November 18th by Dr. Wilder Penfield, professor of neurology and surgery and director of the Montreal Neurological Institute. These lectures will be five in number on the general subject, "Physiological Observations on the Cerebral Cortex of Man."

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*University of Nebraska
College of Medicine*

Dr. Harold E. Eggers has retired as chairman of the department of pathology and bacteriology. Dr. J. P. Tollman has been appointed as professor of clinical pathology and chairman of the department of clinical pathology and bacteriology. Dr. John R. Schenken has been appointed professor of pathology

and acting chairman of the department of gross and microscopic anatomy. He is pathologist at the Nebraska Methodist Hospital in Omaha and will teach general pathology and conduct the Clinical Pathological Conferences. Dr. Pliney Allen has been appointed assistant professor of pathology and pathologist at the Immanuel Deaconess Hospital. Dr. Robert M. Allen has been appointed assistant professor of bacteriology.

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*Louisiana State University
School of Medicine*

New Appointments: Dr. Henry O. Colomb, New Orleans, has been appointed professor of psychiatry and chief of the department of psychiatry. He will develop a program of undergraduate and graduate teaching.

Dr. Harry E. Dascomb, instructor in medicine (assigned to microbiology); Dr. Robert M. Waters, instructor in surgery; Dr. John J. Blasko, clinical instructor in neuropsychiatry; Dr. Louis Raider, clinical instructor in radiology; Dr. Simon V. Ward, Jr., clinical instructor in obstetrics and gynecology; Dr. Harold S. Gamble, assistant in anatomy; Dr. John D. Krafchuk, assistant in microbiology; Dr. James T. McQuitty, clinical assistant in surgery; Dr. Robert D. Bone, clinical assistant in medicine.

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*Ohio State University
College of Medicine*

The Annual Post-Collegiate Clinical Assembly will be held December 6, 1947. Lectures, discussion groups and guest speakers will constitute the scientific program for the day. Class reunions and fraternity banquets are planned for the evening.

Architectural plans are nearing completion for the new Medical Health Center. It will include a new building for the College of Dentistry, a new 600-bed University Hospital, the Mental Disease Admitting Hospital Unit of the State Welfare Department and the Tuberculosis Surgical and Research

Hospital Unit of the State Health Department. Contractors will be asked to bid on this \$11,200,000 expansion program within a few weeks. Construction on this Center will start the first of the year.

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Long Island College of Medicine

The New York State Board of Regents has authorized the college to confer the degree of Doctor of Medical Science to students who complete the three year graduate course in psychiatry under the direction of Dr. Howard W. Potter, professor of psychiatry.

Dr. E. Jefferson Browder, professor of clinical surgery and clinical professor of neurology, has been appointed director of surgery on the College Division of the Kings County Hospital. This appointment fills the vacancy created by the retirement of Dr. Robert F. Barber, who relinquished his teaching duties last June after serving as director for eleven years. The College Division numbers 540 beds of which 135 are utilized for surgical patients.

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*State University of Iowa
College of Medicine*

Dr. Clinton D. Janney will serve as research assistant professor of physiology. Dr. C. M. Kos has been appointed assistant professor of otolaryngology.

Promotions: Dr. J. R. Porter, professor of bacteriology; Dr. George Kalnitsky, assistant professor of biochemistry; Dr. W. A. Robbie, research associate professor of ophthalmology; Dr. A. P. McKee, associate professor of bacteriology; Dr. E. J. Boyd, assistant professor of pathology; Dr. Elizabeth Knapp, research assistant professor of pediatrics; Dr. Marjorie Wilson, research assistant professor of physiology; Dr. J. S. Gottlieb, professor, and Dr. E. P. Huston, associate professor of psychiatry; Dr. H. B. Elkins, assistant professor of radiology; Drs. R. A. Dorner and R. T. Tidrick, associate professor of surgery; Dr. R. G. Bunge, assistant professor of urology.

*University of Georgia
School of Medicine*

The School of Medicine announces an addition of three weeks to its calendar, beginning 1947-1948, the increase changing the school year from thirty-three weeks net to thirty-six weeks net.

Dr. G. Lombard Kelly, dean, has been appointed as the representative of the Medical Association of Georgia to the Hospital Advisory Committee, which was created by Act of the State Legislature of February 1, 1946. Dr. Kelly succeeds the late Dr. C. W. Roberts, of Atlanta.

Dr. José F. Nonidez, professor of microanatomy, died of a coronary thrombosis. He had previously been in the anatomy department at Cornell.

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*Creighton University
School of Medicine*

New Appointments: J. M. Beebe, Ph.D., and J. M. Severens, Ph.D., assistant professors of bacteriology; A. S. Black, M.D., assistant in surgery (plastic surgery); F. C. Campos, M.D., instructor in pathology; R. J. Fangman, M.D., and W. O. Griffith, M.D., acting assistants in medicine; John Ferguson, Ph.D., and H. C. Struck, Ph.D., assistant professors of physiology and pharmacology; R. J. Fitzgibbons, M.D., and H. H. McCarthy, M.D., assistants in surgery; W. N. Hardman, M.D., assistant in surgery in charge of anesthesiology; J. D. Hartigan, M.D., and C. F. Lowry, M.D., assistants in medicine; D. M. C. Reilly, Ph.D., instructor in biochemistry.

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*University of Arkansas
School of Medicine*

Dr. Isadore Meschan, of Western Reserve University, has been appointed chief of the department of radiology. Dr. Wm. A. Reilly of the University of California has been appointed professor and head of the department of pediatrics. Both appointments are on a full time basis.

Medical College of Alabama

Appointments: Dr. E. Carl Sensenig, formerly of the faculty of the Tulane University School of Medicine, has been appointed associate professor of anatomy. Dr. John S. Graham, formerly on the faculty of Tulane, has been appointed assistant professor of physiology and pharmacology. Dr. Harwell Davis, Jr., formerly of Northwestern University, instructor in pathology. Dr. Samuel Upchurch, assistant professor of plastic and maxillofacial surgery; Dr. Arthur Cheneoweth, assistant professor of surgery; Dr. Polly Ayers, assistant professor of preventive medicine and public health; Dr. C. F. Lewis, assistant professor of urology; Dr. Paul Reque, assistant professor of dermatology and syphilology; Dr. James Underwood, assistant professor of radiology.

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*Georgetown University
School of Medicine*

The new \$3,600,000 hospital was opened recently. Formal dedication will take place in the near future. The new hospital contains 407 beds and 123 bassinets, thirteen operating rooms, six delivery and labor rooms and a nursery. Its construction took thirty-one months. The old Georgetown hospital will be used as a dormitory for Georgetown University.

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*Loyola University
School of Medicine*

Dr. John J. Madden has been promoted to professor in the department of neurology and psychiatry; Dr. James J. Callahan to professor and chairman of the department of bone and joint surgery; Dr. Cleveland J. White to chairman of the department of dermatology and syphilology.

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*Wayne University
College of Medicine*

Dr. Albert D. Riedermann of the Cleveland Clinic Foundation has been appointed professor and head of the department of ophthalmology.

*St. Louis University
School of Medicine*

The first Mead Johnson Fellowship of the Society for Pediatric Research was awarded to Dr. Yousef N. Azzouni, of Alexandria, Egypt, now studying in the Pediatric Department. Dr. Azzouni is a visiting fellow in this country. He has spent four years as resident medical officer in the Queen Nazhi Children Hospital of Alexandria and will return to join the faculty of the School of Medicine of the Fuad I University at Cairo.

A testimonial luncheon and special program were held October 18th to honor Dr. Daniel M. Schoemaker, recently appointed Professor Emeritus of Anatomy after forty-two years of teaching in the department. A gold watch, together with a check, were presented to Dr. Schoemaker by his former pupils. The luncheon was attended by Alumni from all sections of the country and by many faculty members of the school.

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*West Virginia University
School of Medicine*

Dr. Milford L. Hobbs has been appointed professor and head of the department of pathology, succeeding the late Dr. Clement C. Fenton.

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*Marquette University
School of Medicine*

Dr. John S. Hirschboeck has been appointed dean to succeed the late Dr. Eben Carey. He graduated from Marquette in 1936. Walter Zeet, Ph.D., associate professor of anatomy, has been appointed director of the department. Dr. Weston D. Gardner is now instructor in the department.

New York Medical College

The Research and Development Board of the Office of the Surgeon General, United States Army, has awarded a contract to the college amounting to \$47,180.00, for a research project under the supervision of Dr. Kurt Lange, assistant clinical professor of medicine, to study the effect of generalized exposure to cold.

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*University of Iowa
College of Medicine*

Dr. Robert T. Tidrick, assistant professor in surgery, has been appointed acting head of the department of surgery at the university hospitals, to succeed Dr. Frank R. Peterson, resigned. Dr. Tidrick, a graduate of Washington University School of Medicine, St. Louis, 1936, has been associated with the university hospitals since 1938.

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*University of Western Ontario
Faculty of Medicine*

Dr. Geo. E. Hall, who became dean of the faculty last year, has been appointed president of the university. He is succeeded in the deanship by Dr. J. B. Collip, formerly professor of biochemistry on the faculty of medicine of McGill University.

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*Northwestern University
Medical School*

Dr. George H. Gardner has been appointed chairman of the department of obstetrics and gynecology to succeed Dr. Arthur H. Curtis, retired. Dr. Gardner is also assistant dean.

NORMAN KORMAN

Word has been received from Wayne University College of Medicine that a former student, Norman Korman, who was a freshman in 1944-1945 and a sophomore in 1945-1946 and was dropped at the end of the second year because of poor scholarship, is seeking admission to other medical schools and is submitting falsified transcripts and other records.

Admission Committees Please Note

General News

Scholar in Medical Science Program

An opportunity to start a career in academic medicine is offered to young scientists with the necessary training to hold a regular faculty appointment and to conduct original research through a new program of "post-fellowship" grants, announced by the John and Mary R. Markle Foundation. The purpose of the program is to attract much needed talent to academic medicine by giving promising young scientists academic security and financial assistance for a period up to five years. The program will be conducted in cooperation with accredited medical schools in the United States and Canada. Grants of \$25,000, payable to the cooperating school at the rate of \$5,000 annually for a five-year period toward the support of each successful candidate or his research or both, will be available beginning with the academic year 1948-1949. If the plan proves successful, the Foundation will appropriate a total of \$1,250,000 to the schools by 1953.

Candidates will be recommended by medical schools and will be limited to young men and women with a particularly strong interest in research and teaching in any of the clinical or pre-clinical sciences or in the sciences basic to medicine. They will have had training in some special field or combination of fields to qualify them to receive a regular faculty appointment and to conduct original research. The final choice will be made, on the basis of the schools' recommendations, by regional committees appointed by the Foundation. The young scientists chosen will be known as "Scholars in Medical Science." No fixed number of scholars will be appointed in any year, but it is expected that approximately fifty (50) will receive appointments during the five year period. For each scholar, the school will determine salary and academic rank, encourage research by setting reasonable

limits on teaching and other non-research activities, provide laboratory facilities, and, if necessary, make a financial contribution toward the support of his work.

The program places the emphasis on the personal qualities and scientific and teaching abilities of the men and women chosen, rather than on particular research projects or teaching fields in which they may be interested. The program is the result of a survey of medical research and education, recently made by the Foundation, which shows that while there are scholarships and other forms of financial aid for the student in the course of his scientific training and while there are funds available to the scientist once his name is made, there are few sources of help at the beginning of the career of the man who chooses academic medicine.

A pamphlet covering the details of the plan has been sent to deans of all accredited medical schools. Persons interested in being considered as candidates are referred to them for further information.

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U. S. Public Service Research Fellowships

The Surgeon General of the U. S. Public Health Service has been given the authority to establish and maintain research fellowships. These fellowships are intended to promote the training and development of investigators in the field of medicine and related sciences.

Types of Fellowships:

1. A predoctorate fellowship is available to qualified applicants who have a Bachelor's Degree. This fellowship carries an annual stipend of \$1,200 for applicants without dependents and \$1,600 for persons with dependents. In addition, the tuition fee is paid by the U. S. Public Health Service.

2. A predoctorate research fellowship is available to qualified applicants hold-

ing a Master's Degree or its equivalent in graduate training. This fellowship carries a stipend, in addition to tuition fees, of \$1,600 for persons without dependents and \$2,000 for persons with dependents.

3. A postdoctorate research fellowship is awarded to qualified persons holding a Doctor's Degree in medical or related fields. This fellowship does not provide tuition fees but carries a stipend of \$3,000 per year for doctors without dependents and \$3,600 per year for those with dependents. An increase of \$300 each year is granted to those Doctorate Fellows who are reappointed.

4. Special research fellowships are awarded to applicants who qualify for a postdoctorate fellowship and in addition have demonstrated outstanding ability or who possess specialized training for a specific problem. This fellowship does not carry a set stipend but is determined in the individual case.

Fellowships are awarded for one-year periods and may be renewed. Except in unusual circumstances, Postdoctorate Fellows are not reappointed for a third year.

Fellowship applications are acted on and awards made at approximately three-month intervals.

Forms of application for a research fellowship may be obtained from the Division of Research Grants and Fellowships, National Institute of Health, Bethesda 14, Maryland.

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Courses in Cancer

The National Cancer Institute is prepared to give aid to medical schools for further development of courses in cancer for medical students. This new activity is being inaugurated on the recommendation of the National Advisory Cancer Council which, in turn, based its recommendations on the results of a conference on cancer in the medical school curriculum held at the National Cancer Institute by a committee of medical educators. The new program of aid to medical schools is designed to place

greater emphasis on the integration of cancer instruction in the total undergraduate curriculum.

The deans of all medical schools have been advised that the National Advisory Cancer Council is prepared to receive applications for financial assistance in expanding their cancer teaching programs. Grants will range from \$10,000 to \$25,000 per year depending on the activities to be undertaken. Under provisions of the Appropriations Act that authorized this program, funds are available until spent. In order to assure continuity, funds have been set aside already for next year. It is anticipated that other agencies interested in promoting cancer control work will also give financial assistance to this program.

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Smithwick Foundation

Dr. Chester W. Howe, Framingham, has accepted an appointment at the Smithwick Foundation, where he will conduct research on wound infections. He will have available the facilities of the Massachusetts Memorial hospitals, as well as those of the Smithwick Foundation and Boston University School of Medicine, all of Boston, through which funds will be made available. Before going to Framingham Dr. Howe was an instructor in surgery at Boston University School of Medicine.

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Medical Education Awards in Mississippi

The Mississippi Medical Education Board has approved ninety-three medical aid awards to students who have agreed to return to rural Mississippi to practice medicine after the completion of their education. The students may study in any university of their choice. The board was created in accordance with legislation passed by the legislature in 1946.

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Tumor Registry in Washington

The Washington State Tumor Registry has been set up at the university

under the sponsorship of the state society of pathologists, the School of Medicine and the state health department. This clearing house will afford physicians throughout the state consultation service in diagnosing cancer. Pathologists throughout Washington will submit to the registry duplicate microscopic slides of all cancerous and questionable tumors as well as certain benign tumors coming into their laboratories. The expenses of the registry will be defrayed by the cancer control section of the state health department, and the pathologists' society will act in an advisory capacity. Practicing pathologists under the registry work free of charge should indigent patients need medical aid.

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Books for Finland

Finland has an excellent and keenly scientific minded technical institute, Teknillinen Korkeakoulu. During the war its library was bombed and totally destroyed. Dr. Martti Levon, director of the institute, would welcome gifts of scientific and technical books and periodicals from America to take the place of those destroyed. In the remarkable efforts for recovery that the Finns are making, the lack of technical library facilities is a very serious handicap. It would be a practical act of friendship to a nation that holds America in high

regard if Americans should contribute good technical books and periodicals to this library. Any such gifts should be marked for the Institute of Technology, Helsinki, and sent to the Legation of Finland, 2144 Wyoming Ave., N. W., Washington, D. C.

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Roche-Organon Awards in Endocrinology

Three awards of \$500.00 each have been sponsored by Roche-Organon, Inc., hormone manufacturers, for scientists in recognition of their recent, outstanding research in these fields of endocrinology: animal experimentation, hormone chemistry, and chemical endocrinology. The winners of the 1947 awards are: Dr. Fuller Albright (clinical endocrinology), Dr. Robert D. H. Heard (hormone chemistry), and Dr. Dwight J. Ingle (animal experimentation).

The winners of the Roche-Organon awards were selected by the Committee on Awards of the Laurentian Hormone Conference which consists of Dr. Roy G. Hoskins, Chairman, and Drs. Edwin B. Astwood, Thomas F. Gallagher, Allan T. Kenyon, Robert L. Noble, and Abraham White. The awards were presented at the 1947 Laurentian Hormone Conference held recently at Ste. Adèle, Quebec, Canada.

Book News

Internal Medicine in General Practice

By Robert Pratt McCombs, M.D., Assistant Professor of Medicine and Director of Postgraduate Teaching, Tufts College Medical School. Ed. 2. W. B. Saunders Company, Philadelphia. 1947. Price, \$8.

Basic principles of every day problems in internal medicine are factually reviewed, whereas controversial material, discussion of diseases encountered but rarely in the United States and descriptions of those technical procedures which are usually considered to lie solely within the province of specialists are condensed or omitted entirely. Thus, the book remains a comparatively small volume which will be appreciated by medical students. The text has been brought up-to-date. What is old has been deleted and much new material has been added. Medical students, as well as practitioners, will find this a very useful book.

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Communal Sick Care in the German Ghetto

By Jacob R. Marcus, Ph.D., Adolph S. Ochs Professor of Jewish History, Hebrew Union College. The Hebrew Union College Press, Cincinnati. 1947. Price, \$2.50.

A description of the communal care of the sick in German lands of the late medieval period by Jewish agencies. The geographical area included is, roughly, the Holy Roman Empire, primarily Germany and the Hapsburg lands. The material does not extend beyond the year 1800. This is a most interesting and informative recital, especially the chapter devoted to the Jewish Hospital. A fine historical document.

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The Diagnosis and Treatment of Diarrheal Diseases

By William Z. Fradkin, M.D., Assistant Attending Gastroenterologist, Jewish Hospital, Brooklyn. Grune & Stratton, New York. 1947. Price, \$6.

Presenting present knowledge regarding diarrheal diseases, especially their etiology and treatment. A book not for the student, but for the specialist as well as the general practitioner.

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Psychopathology: A Survey of Modern Approaches

By J. Ernest Nicole, Medical Superintendent, Winwick Hospital. Ed. 4. The Williams & Wilkins Company, Baltimore. 1947. Price, \$4.75.

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Physikalische Medizin in Diagnosrik und Therapie

Wolfgang Holzer, Professor Dr. Med. et Dr. Ing., Vorstand der Psychiatrischen Universitätsklinik Graz. Ed. 5 and 6. Verlag, Wilhelm Maudrich, Wien. 1947. Price, \$9.

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Hospital Care in the United States

Commission on Hospital Care. The Commonwealth Fund, New York. 1947. Price, \$4.50.

A study of the general hospital; its role in the care of all types of illness and the conduct of activities related to patient service, with recommendations for its extension and integration for more adequate care of the American public. Dr. A. C. Bachmeyer, director of the Billings Hospital, was the director of the study reported on in this book. This book should have a wide appeal to civilians as well as to the medical profession. It must be read to be appreciated at its full value. There is too much "meat" in it to make an adequate review possible.

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Introduction to Medical Psychology

By L. Erwin Wexberg, M.D., Director, Bureau of Mental Hygiene, District of Columbia. Grune & Stratton, New York. 1947.

A collection of a series of lectures on medical psychology delivered to sophomore medical students. No other similar text is available.

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Man's Manual of Diseases of the Eye

By Charles A. Perera, M.D., Assistant Clinical Professor, College of Physicians and Surgeons, Columbia University. Ed. 19. Williams & Wilkins Company, Baltimore. 1947. Price, \$4.

This perennial will be recognized by many professional men who graduated nearly fifty years ago. Apparently, it still has attraction since it is coming back better than ever. It is still a good text for students.

* *

Symptoms and Signs in Clinical Medicine: An Introduction to Medical Diagnosis

By E. Noble Chamberlain, M.D., Lecturer in Medicine, University of Liverpool. Ed. 4. The Williams & Wilkins Company, Baltimore. 1947. Price, \$8.

Revised and brought up to date.

*Infant Nutrition:
A Textbook of Infant Feeding*

By P. C. Jeans, M.D., Professor of Pediatrics, College of Medicine, State University of Iowa, and Williams McKim Marriott, M.D., late Professor of Pediatrics, Washington University School of Medicine. Ed. 4. The C. V. Mosby Company, St. Louis, Mo. 1947.

Nutrition for the infant brought up to date.

* *

A Handbook of Ocular Therapeutics

By the late Sanford R. Gifford, M.D., Professor of Ophthalmology, Northwestern University Medical School; revised by Derrick Vail, M.D., Professor of Ophthalmology, N. U. M. School. Ed. 4. Lea & Febiger, Philadelphia. 1947. Price, \$5.

A concise, authoritative modern guide to treatment brought up to date.

* *

Physical Fitness Appraisal and Guidance

By Thomas Kirk Cureton, Jr., Ph.D., Professor of Physical Education and Director of the Physical Fitness Research Laboratory, University of Illinois; assisted by Frederick W. Kasch, Director of Physical Education, College of Medicine, Dentistry and Pharmacy, University of Illinois, and John Brown, Assistant Director, and W. G. Moss, Instructor in Physiology, College of Medicine, University of Illinois. The C. V. Mosby Company, St. Louis. 1947. Price, \$6.

Based on many years of a full experience in this field, the authors present a very valuable first book which cannot but be helpful to physicians, physical directors, athletic coaches and others who must necessarily have a large interest in the health and physical fitness of students and persons, generally, with whom they come in contact.

* *

Rypin's Medical Licensure Examinations

Under the editorial direction of Walter L. Biering, M.D., Secretary Federation of State Medical Boards of the United States, with the collaboration of a review panel whose personnel consists of men well known and experienced each in his own special field. Ed. 6. J. B. Lippincott Company, Philadelphia. 1947. Price, \$6.

Even the medical student who is not yet preparing to pass a state licensing examination will find this book extremely useful for review purposes. It also contains a chapter on psychiatry—an innovation. Browsing through the book, the reviewer is astonished at how much one can forget with the passing of time and how necessary, therefore, it is to have this book handy as an aid to bringing back forgotten lore.

The American Illustrated Medical Dictionary

By W. A. Newman Dorland, M.D., with the collaboration of E. C. L. Miller, M.D., Medical College of Virginia. Ed. 21. W. B. Saunders Company, Philadelphia. 1947. Price, \$8.50.

The ending of the war brings this splendid dictionary. It is more than a dictionary—a definer of terms. It contains much useful information on matters connected with or concerned with medicine, directly and indirectly. Like a general dictionary, no book, except the Bible, can give so much pleasure to him who reads with understanding and who wishes to learn more than he knows as does a dictionary dealing with medicine and related subjects. Every student should make it a *must* to own a copy of this book.

* *

Elementary Medical Physics

By Harold O. Stearns, Associate Professor of Physics, Simmons College. The Macmillan Company, New York. 1947. Price, \$4.75.

For the intending medical student. Clear and concise.

* *

*Endoskopie Der Harnroehre:
Diagnostik und Therapie*

By Alois Glingar, Facharzt for Urologie in Wien. Verlag Wilhelm Maudrich, Wien. 1947. Price, \$4.

A very brief recital for the specialist—and the general practitioner who dares enter this field of work.

* *

The Practical Nurse

By Dorothy Deming, R.N., Consultant in Public Health Nursing, American Public Health Association. The Commonwealth Fund, New York. 1947. Price, \$3.

Describing the duties of the practical nurse.

* *

A Concise Comparative Anatomy

By William Henry Atwood, Head of the Department of Biology, Milwaukee State Teachers College. The C. V. Mosby Company, St. Louis. 1947. Price, \$3.75.

There was a time when comparative anatomy was a subject in the medical curriculum. Under pressure of other subjects more a part of medical education in that they were purely medical, comparative anatomy, or biology, as it was sometimes termed, was dropped. Perhaps, it would have been desirable to keep it a part of the medical curriculum. If it had been, this book would have been a good text.

Textbook of Zoology

By George Edwin Potter, Ph.D., Professor of Zoology, Agricultural and Mechanical College of Texas. Ed. 2. The C. V. Mosby Company, St. Louis. 1947. Price, \$5.

Would that we could turn back the clock and begin the study of zoology. If that were possible, this book would be the choice as a text.

* *

Communicable Diseases

By Franklin H. Top, M.D., Medical Director Herman Kiefer Hospital, Detroit; Professor of Preventive Medicine and Public Health, Wayne University College of Medicine—and Collaborators. Ed. 2. The C. V. Mosby Company, St. Louis. 1947. Price, \$8.50.

This book is too well known to require any encomiums as to its worth as a text. It is divided into two sections: I.—General considerations applicable to communicable diseases; II.—Communicable and infectious diseases classified by common portal of entry. An appendix gives many important data properly tabulated. The glossary is also worth while. But, again, this reviewer wonders whether it is worth while to spend so much space on bibliography. Students do not have the time to consult the literature and practitioners do not, in most instances, have convenient access nor the time to consult a library.

* *

Morphologic Hematology (Special Issue No. 1 of BLOOD, Journal of Hematology)

William Dameshek, M.D., Editor-in-Chief. Grune and Stratton, New York. 1947. Price, \$4.75.

A series of articles dealing with hematology written by twenty-six specialists in this field.

* *

Handbook of Psychiatry

By Winfred Overholser, M.D., Professor of Psychiatry, George Washington University, and Winifred V. Richmond, Ph.D., late Chief, Department of Psychology, Saint Elizabeth's Hospital, Washington, D. C. The J. B. Lippincott Company, Philadelphia. 1947. Price, \$4.

Whether or not the reader be close to the problems of mental illness, he will gain much from this book. The authors discuss the misconceptions surrounding psychiatry by revealing facts, adjusting popular fallacies and exposing the dangers of quack "psychologists." The authors differentiate between psychology and psychiatry; show the role psychiatry plays in life from the cradle to the grave and give clear descriptions of the major personality disorders and their treatment. A worth while book.

Textbook of the Nervous System: A Foundation for Clinical Neurology

By H. Chandler Elliott, Ph.D., Assistant Professor of Anatomy, Medical College of the State of South Carolina. With an Introduction by Wilder Penfield, M.D. J. B. Lippincott Company, Philadelphia. 1947. Price, \$8.

A new approach to the teaching and learning of the structure and function of the nervous system. Structure and function are integrated. It offers short cuts to clear understanding through repetition and association between the details of neuroanatomy and neurophysiology. The book is divided into three parts. Part I gives a brief, elementary description of the nervous system. Part II fills in this outline with useful detailed information. Part III presents realistic illustrations and discussions of actual brain form. This is an important innovation to the developmental approach. Text and illustrations are thoroughly integrated. The illustrations are numerous and well made. An extensive bibliography and a good index are also commendable features of the book.

* *

Essentials of Pharmacology

By Frances K. Oldham, Ph.D., Research Associate in Pharmacology; F. E. Kelsey, Ph.D., Associate Professor of Pharmacology, and E. M. K. Geiling, M.D., Frank P. Hixon Distinguished Service Professor and Chairman of the Department of Pharmacology, University of Chicago. J. B. Lippincott Company, Philadelphia. 1947. Price, \$5.

A concise and complete coverage of the entire field of pharmacology. Drugs are grouped according to their actions and uses in a natural and functional organization. We raise the question whether it is in keeping with the idea of "essentials" to give so much space to bibliography. As a matter of fact, is a bibliography necessary?

* *

Synopsis of Obstetrics

By Jennings C. Litzenberg, M.D., Professor Emeritus of Obstetrics and Gynecology, University of Minnesota Medical School. Ed. 3. The C. V. Mosby Company, St. Louis. 1947. Price, \$5.50.

Aside from making a revision of the text as a whole, the relation of the Rh factor in pregnancy is introduced and discussed fully by a collaborator, the diagnosis of pregnancy, the relief of pain in labor, diabetes in pregnancy, puerperal infections and their treatment with the sulfonamides and penicillin have been thoroughly revised and brought up to date. The author's long experience as a specialist and teacher is reflected in this handy little volume offered, primarily, to the medical student.

Fatigue and Impairment in Man

By S. Howard Bartley, Ph.D., Professor of Research, and Eloise Chute, M.A., Research Associate in the Visual Sciences, Dartmouth Eye Institute, Dartmouth Medical School. Foreword by A. C. Ivy, M.D., Vice President, Chicago Professional Colleges, University of Illinois. McGraw-Hill Book Company, Inc., New York. 1947. Price, \$5.50.

The authors assume that human activity is determined and regulated by other than purely energetic considerations; that the organism plays a part in determining what conditions limit it.

* *

Diagnostic Bacteriology

A textbook for the isolation and identification of pathogenic bacteria for medical bacteriology laboratories. By Isabelle Gilbert Schaub, A.B., Instructor in Bacteriology, Johns Hopkins University School of Medicine, and M. Kathleen Foley, A.B., Instructor in Bacteriology, College of Notre Dame of Maryland. Ed. 3. The C. V. Mosby Company, St. Louis. 1947. Price, \$4.50.

A good book for the intending medical technician especially if he has a leaning toward bacteriology. The text is complete and presented commendably.

* *

Gifford's Textbook of Ophthalmology

By Francis H. Adler, M.D., Professor of Ophthalmology, University of Pennsylvania Medical School. Ed. 4. W. B. Saunders Company, Philadelphia. 1947. Price, \$6.

Written primarily for the medical student and the practitioner who is not a specialist in ophthalmology. The end aimed at has been achieved.

* *

Practical Clinical Psychiatry

By Edward A. Strecker, M.D., Professor of Psychiatry, University of Pennsylvania School of Medicine, Franklin E. Ebaugh, M.D., Professor of Psychiatry, University of Colorado School of Medicine, and Jack R. Ewalt, M.D., Professor of Neuropsychiatry, University of Texas School of Medicine; with a section on Psychopathologic Problems of Childhood, by Leo Kanner, M.D., Associate Professor of Psychiatry, Johns Hopkins University School of Medicine. Ed. 6. The Blakiston Company, Philadelphia. 1947. Price, \$5.

A multum in parvo—but well done by men of authority. Again, we ask, why so much bibliography when those who will read this book do not have access to a library nor the inclination to search beyond the text?

Essentials of Prescription Writing

By Cary Eggleston, M.D., Associate Professor of Clinical Medicine, Cornell University Medical College. Ed. 3. W. B. Saunders Company, Philadelphia. 1947. Price, \$2.

This book is too well known to need comment—but any medical student who does not possess a copy of this book is missing more than he realizes. It is the most valuable aid to the practice of medicine available.

* *

Fundamentals of Neurology

By Ernest Gardner, M.D., Assistant Professor of Anatomy, Wayne University College of Medicine. W. B. Saunders Company, Philadelphia. 1947. Price, \$4.75.

Fundamentals—just that; therefore should be useful to the medical student who usually finds this a difficult subject and one which is too much neglected in teaching.

* *

Pharmacology, Therapeutics and Prescription Writing

By Walter A. Bastedo, M. D., Associate in Pharmacology and Therapeutics and Assistant Clinical Professor of Medicine, Columbia University. Ed. 5. W. B. Saunders Company, Philadelphia. 1947. Price, \$8.50.

This book has been used as a teaching text for so many years that it has established a place for itself which is recognized by many teachers of pharmacology.

* *

A Textbook of Bacteriology

By Thurman B. Rice, M.D., Professor of Bacteriology and Public Health, Indiana University School of Medicine. Ed. 4. W. B. Saunders Company, Philadelphia. 1947. Price, \$6.50.

Just another text on bacteriology.

* *

Endogenous Endocrinotherapy Including the Causal Cure of Cancer

By Dr. Jules Samuels, Specialist for endogenous endocrinotherapy, Amsterdam. Hollert & Co., Amsterdam. 1947.

* *

The Selected Writings of Benjamin Rush

Edited by Dagobert D. Runes. Philosophical Library, New York. 1947. Price, \$5.

* *

Plague: Laennec (1782-1826), inventor of the stethoscope and father of modern medicine

By Arthur N. Foxe, M.D. The Hobson Book Press, New York. 1947. Price, \$2.50.

Calcific Disease of the Aortic Valve

By Howard T. Karsner, M.D., Professor of Pathology, Western Reserve University, and Simon Koletsky, M.D., Institute of Pathology, Western Reserve University and University Hospitals of Cleveland. J. B. Lippincott Company, Philadelphia. 1947. Price, \$5.

A comprehensive survey of calcific sclerosis, a condition difficult to trace in the literature. Makes available important material. In addition to a careful and thorough review of the literature, the text is based on 200 autopsies. The authors have had a wide experience in this as well as in the whole field of pathology and by presenting the material here described, they have rendered further service to the study of diseases of the aorta.

* *

Fundamentals of Psychiatry

By Edward A. Strecker, M.D., Professor of Psychiatry, University of Pennsylvania School of Medicine. Ed. 4. J. B. Lippincott Company, Philadelphia. 1947. Price, \$4.

Emphasizes the relationship between psychiatry and general medicine including a compact and complete coverage of symptoms, methods of examination, etiology, treatment and prognosis of psychoses. A valuable book for the student.

Surgery of the Ambulatory Patient

By L. Kraeer Ferguson, M.D., Professor of Surgery, Graduate School of Medicine, University of Pennsylvania and Woman's Medical College: With a section on fractures by Louis Kaplan, M.D., Associate in Surgery, University of Pennsylvania. Ed. 2. J. B. Lippincott Company, Philadelphia. 1947. Price, \$10.

An integrated picture of office surgery, including equipment needed. Progressive, step by step descriptions are given for each specific procedure. The book is divided into three parts: Part I: A general discussion of fundamental problems, such as supplies, conduct of operations, typical lesions with a description of the cause, course and after care and an excellent consideration of anesthesia. Part II: Covers the common surgical lesions and methods of treatment. Part III: Covers dislocations and fractures. More than six hundred well made and clarifying illustrations add much of value to the book.

* *

Pharmaceutical Laboratory Manual

By R. A. Kuever, Ph.C., Dean and Professor of Pharmacy, College of Pharmacy, State University of Iowa. J. B. Lippincott Company, Philadelphia. 1947. Price, \$2.75.

For the pharmacy student.

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1. Liebert, E. (1947). Treatment of Neurological Disorders with Tridione, Illinois Med. J., 91:311, June.
2. Lennox, W. G. (1947). Tridione in the Treatment of Epilepsy, J. Amer. Med. Assn., 134:138, May 10.
3. DeJong, R. N. (1946). Further Observations on the Use of Tridione in the Control of Psychomotor Attacks, Amer. J. Psychiat., 103:162, September.

